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L45 ANSWER 1 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:298909 HCAPLUS

DOCUMENT NUMBER: 141:70850

TITLE: Feeding 2-hydroxy-4-(methylthio)-butanoic acid to periparturient dairy cows improves milk production but not hepatic metabolism

AUTHOR(S): Piepenbrink, M. S.; Marr, A. L.; Waldron, M. R.; Butler, W. R.; Overton, T. R.; Vazquez-Anon, M.; Holt, M. D.

CORPORATE SOURCE: Department of Animal Science, Cornell University, Ithaca, NY, 14853, USA

SOURCE: Journal of Dairy Science (2004), 87(4), 1071-1084
CODEN: JDSCAE; ISSN: 0022-0302

PUBLISHER: American Dairy Science Association

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Holstein dairy cows (n=48) entering second or later lactation were used to determine the effects of 2-hydroxy-4-(methylthio)butanoic acid (HMB, methionine hydroxy analog) on milk production, hepatic lipid metabolism, and

gluconeogenesis

during the periparturient period. The cows were fed 3 diets as total mixed rations starting 21 days before expected calving. The diets contained 0 (basal diet), 0.09 (+HMB), or 0.18 (++)HMB% HMB. From parturition to 84 days in milk, the cows were fed diets with 0, 0.13, or 0.20% HMB. Prepartum and postpartum dry matter intakes were similar among cows fed the basal, +HMB, and ++HMB diets. There was a quadratic effect on milk yield such that cows fed +HMB had the greatest milk yield; yields of milk in cows fed the basal and ++HMB diets were similar. This led to trends for increased yields of 3.5% fat-corrected milk and total milk solids when cows were fed +HMB diet. The % of milk fat, protein, and total solids were not affected by dietary treatments. Despite differences in milk yield, the calculated energy balance was not affected by dietary treatments. Blood plasma concns. of nonesterified fatty acids, β -hydroxybutyrate, and glucose were not different among the treatments. Liver triglyceride contents were similar among treatments on day 1 postpartum and were increased in cows fed +HMB diet on day 21 postpartum compared to the other dietary treatments. The capacities for metabolism of [1-14C]palmitate by liver slices in vitro were not affected by treatments, but the conversion of [1-14C]propionate to CO₂ and glucose decreased as the amount of HMB fed increased on day 21 postpartum. Cows fed +HMB had greater days-to-first ovulation compared with cows fed the basal and ++HMB diets as measured by blood plasma progesterone concns. Thus, adding HMB to low-methionine diets to achieve methionine level of .apprx.2.3% of metabolizable protein supply is beneficial for increasing milk production, but does not appear to benefit hepatic energy metabolism

during

early lactation.

IT 50-99-7, D-Glucose, biological studies 57-10-3,
Hexadecanoic acid, biological studies 63-42-3, Lactose
79-09-4, Propionic acid, biological studies 300-85-6,
 β Hydroxybutyric acid 9005-79-2, Glycogen, biological
studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(dietary 2-hydroxy-4-(methylthio)butanoic acid (methionine hydroxy
analog) improves milk production but not hepatic metabolism in

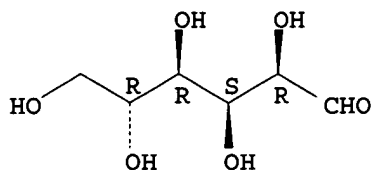
periparturient

Holstein dairy cows)

RN 50-99-7 HCAPLUS

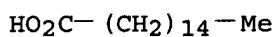
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 57-10-3 HCAPLUS

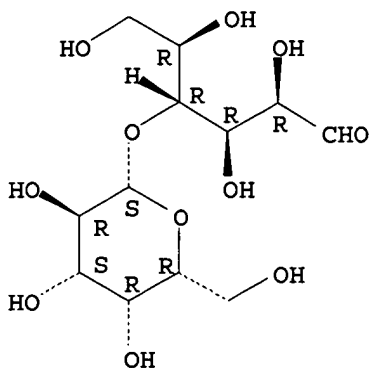
CN Hexadecanoic acid (9CI) (CA INDEX NAME)



RN 63-42-3 HCAPLUS

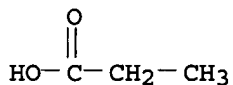
CN D-Glucose, 4-O-β-D-galactopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



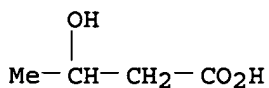
RN 79-09-4 HCAPLUS

CN Propanoic acid (9CI) (CA INDEX NAME)



RN 300-85-6 HCAPLUS

CN Butanoic acid, 3-hydroxy- (9CI) (CA INDEX NAME)



RN 9005-79-2 HCAPLUS

CN Glycogen (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 63-68-3, L-Methionine, biological studies 583-91-5,

2-Hydroxy-4-(methylthio)-butanoic acid

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(dietary 2-hydroxy-4-(methylthio)butanoic acid (methionine hydroxy analog) improves milk production but not hepatic metabolism in

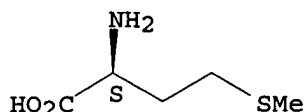
periparturient

Holstein dairy cows)

RN 63-68-3 HCAPLUS

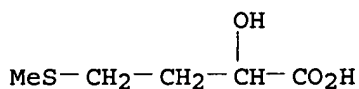
CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 583-91-5 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 2 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:220127 HCAPLUS

DOCUMENT NUMBER: 140:270109

TITLE: Use of metal chelates in human or animal feeding

INVENTOR(S): Cinti, Enrico; Ciribolla, Antonio

PATENT ASSIGNEE(S): Agristudio S.R.L., Italy

SOURCE: PCT Int. Appl., 26 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004021802	A2	20040318	WO 2003-IT400	20030627
WO 2004021802	A3	20040415		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.:

IT 2002-RE67

A 20020906

IT 2003-MI863

A 20030429

AB The present invention relates to the use in human and animal nutrition (monogastric and polygastric animals) of known chelates of bivalent metal Mg, Ca, Mn, Co, Cu, Zn and Fe with methionine hydroxy analog. The present invention further relates to a method for preparing new chelates with methionine hydroxy analog, both in solid form with iron (II), vanadium (IV) and (V) and molybdenum (V) and (VI), and in liquid form in aqueous solution with iron (II) and (III) and chrome (III). Eventually, the present invention relates to the use of said new chelates, both in solid form with iron (II), vanadium (IV) and (V) and molybdenum (V) and (VI), and in liquid form in aqueous solution with iron (II) and (III) and chrome (III), in human and animal nutrition.

IT 583-91-5DP, metal complexes 292140-23-9P

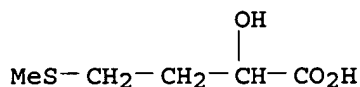
292140-29-5P 292140-30-8P 292140-31-9P

292140-32-0P 292140-33-1P 610765-76-9P

RL: FFD (Food or feed use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)
(use of metal chelates in human or animal feeding)

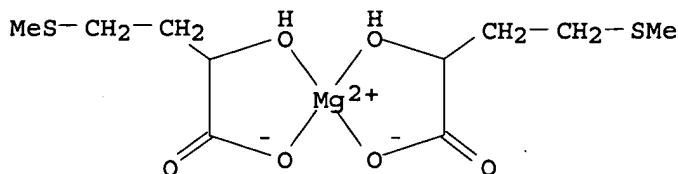
RN 583-91-5 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



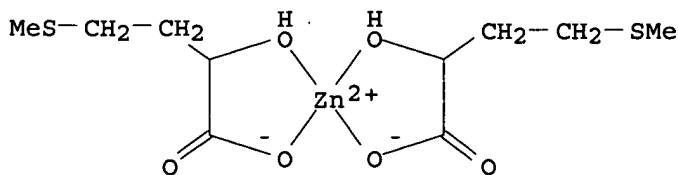
RN 292140-23-9 HCAPLUS

CN Magnesium, bis[2-(hydroxy-κO)-4-(methylthio)butanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



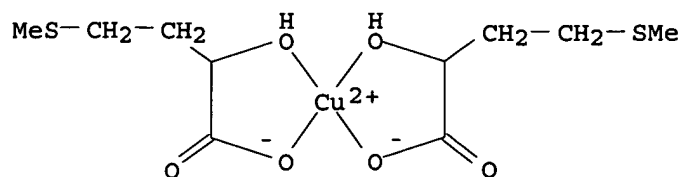
RN 292140-29-5 HCAPLUS

CN Zinc, bis[2-(hydroxy-κO)-4-(methylthio)butanoato-κO]-, (T-4)- (9CI) (CA INDEX NAME)



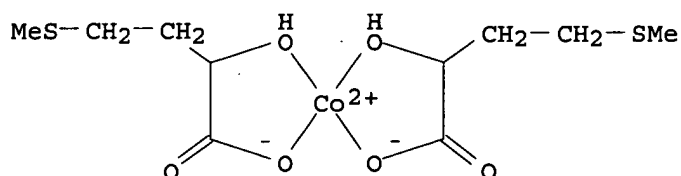
RN 292140-30-8 HCAPLUS

CN Copper, bis[2-(hydroxy-κO)-4-(methylthio)butanoato-κO]- (9CI) (CA INDEX NAME)



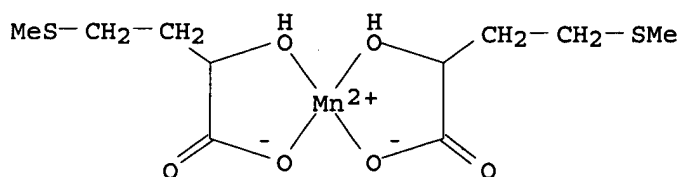
RN 292140-31-9 HCAPLUS

CN Cobalt, bis[2-(hydroxy-κO)-4-(methylthio)butanoato-κO] - (9CI)
(CA INDEX NAME)



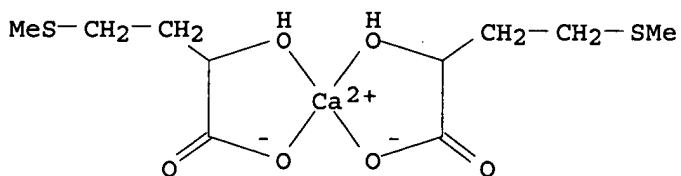
RN 292140-32-0 HCAPLUS

CN Manganese, bis[2-(hydroxy-κO)-4-(methylthio)butanoato-κO] -
(9CI) (CA INDEX NAME)



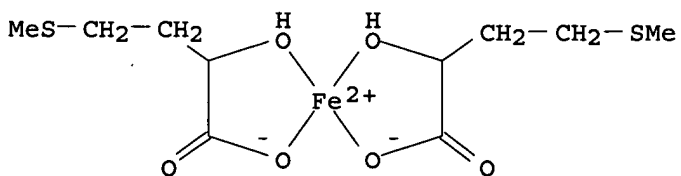
RN 292140-33-1 HCAPLUS

CN Calcium, bis[2-(hydroxy-κO)-4-(methylthio)butanoato-κO] -,
(T-4) - (9CI) (CA INDEX NAME)

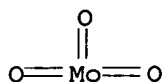


RN 610765-76-9 HCAPLUS

CN Iron, bis[2-(hydroxy-κO)-4-(methylthio)butanoato-κO] -, (T-4) -
(9CI) (CA INDEX NAME)



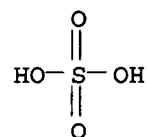
IT 1313-27-5, Molybdenum(VI) oxide, reactions 1314-62-1,
 Vanadium(V) oxide, reactions 7720-78-7, Ferrous sulfate
 16065-83-1D, Chromium(III), salts, reactions 20074-52-6D
 , salts, reactions 23597-90-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (use of metal chelates in human or animal feeding)
 RN 1313-27-5 HCAPLUS
 CN Molybdenum oxide (MoO₃) (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 1314-62-1 HCAPLUS
 CN Vanadium oxide (V₂O₅) (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 7720-78-7 HCAPLUS
 CN Sulfuric acid, iron(2+) salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Fe(II)

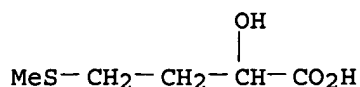
RN 16065-83-1 HCAPLUS
 CN Chromium, ion (Cr³⁺) (8CI, 9CI) (CA INDEX NAME)

Cr³⁺

RN 20074-52-6 HCAPLUS
 CN Iron, ion (Fe³⁺) (8CI, 9CI) (CA INDEX NAME)

Fe³⁺

RN 23597-90-2 HCAPLUS
 CN Butanoic acid, 2-hydroxy-4-(methylthio)-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L45 ANSWER 3 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:912094 HCAPLUS

DOCUMENT NUMBER: 140:145274

TITLE: Adaptations in body muscle and fat in transition dairy cattle fed differing amounts of protein and methionine hydroxy analog

AUTHOR(S): Phillips, G. J.; Citron, T. L.; Sage, J. S.; Cummins, K. A.; Cecava, M. J.; McNamara, J. P.

CORPORATE SOURCE: CH2M Hill, Hanford, WA, USA

SOURCE: Journal of Dairy Science (2003), 86(11), 3634-3647

CODEN: JDSCAE; ISSN: 0022-0302

PUBLISHER: American Dairy Science Association

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The effects of prepartum dietary protein intake and dietary amino acid balance on milk production, adaptations in body fat, and blood serum protein and amino acid concns. (and indirectly body protein breakdown) in early lactation were studied in 42 multiparous Holstein dairy cows. The cows were fed diets containing 11 or 14% crude protein (CP) with or without 20 g methionine hydroxy analog daily for 21 days prepartum and then were fed common diet with 17% CP for 120 days postpartum, with or without 50 g methionine hydroxy analog (Rhodimet AT-88) daily. The dry matter (DM) intake postpartum averaged 25.4 kg and milk production 41.6 kg. Cows fed the 14% CP diet ate 0.7 kg more DM and gave 1.7 kg more milk than those fed the 11% CP diet prepartum. Cows fed the methionine hydroxy analog prepartum lost less body protein from -14 to +60 days in milk. From day 60 to 120, body fat increased 8.5 and 11.5 kg in low- and high-protein groups and body protein increased 0.5 and 1.0 kg. Blood serum concns. of branched-chain amino acids fell 17% in the first few weeks postpartum, lysine fell 15%, histidine fell 16%, methionine increased 20%, and cysteine increased 30%. The serum 3-methylhistidine/creatinine ratio was determined to indicate muscle protein degradation. An increase in this ratio 7 days postpartum indicated increased body protein breakdown and there was no effect of prepartum ration composition. Increased protein intake prepartum may allow more feed intake and milk production postpartum. Supplementing the methionine analog to a ration already balanced in methionine by contemporary models may spare body protein.

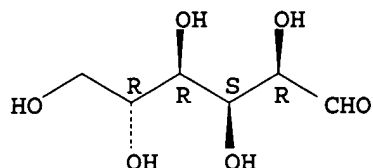
IT 50-99-7, D-Glucose, biological studies 52-90-4, L-Cysteine, biological studies 56-86-0, L-Glutamic acid, biological studies 56-87-1, L-Lysine, biological studies 57-13-6, Urea, biological studies 60-27-5, Creatinine 61-90-5, Leu, biological studies 63-42-3, Lactose 63-68-3, L-Methionine, biological studies 71-00-1, L-Histidine, biological studies 72-18-4, L-Valine, biological studies 73-32-5, L-Isoleucine, biological studies 74-79-3, L-Arginine, biological studies 147-85-3, Proline, biological studies 368-16-1, 3-Methylhistidine
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(diets with differing amts. of protein and methionine hydroxy analog effects on adaptations in body muscle and fat in transition Holstein dairy cows)

RN 50-99-7 HCAPLUS

CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

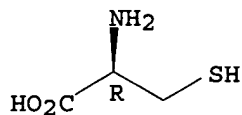
Absolute stereochemistry.



RN 52-90-4 HCAPLUS

CN L-Cysteine (9CI) (CA INDEX NAME)

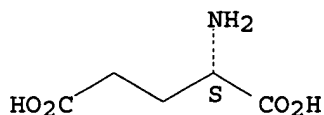
Absolute stereochemistry.



RN 56-86-0 HCAPLUS

CN L-Glutamic acid (9CI) (CA INDEX NAME)

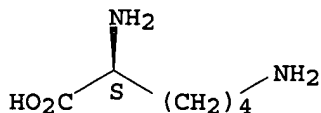
Absolute stereochemistry.



RN 56-87-1 HCAPLUS

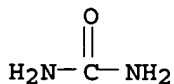
CN L-Lysine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



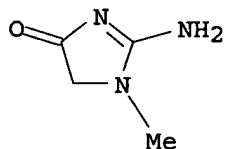
RN 57-13-6 HCAPLUS

CN Urea (8CI, 9CI) (CA INDEX NAME)



RN 60-27-5 HCAPLUS

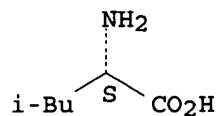
CN 4H-Imidazol-4-one, 2-amino-1,5-dihydro-1-methyl- (9CI) (CA INDEX NAME)



RN 61-90-5 HCAPLUS

CN L-Leucine (9CI) (CA INDEX NAME)

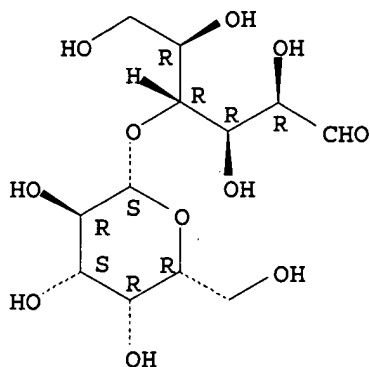
Absolute stereochemistry. Rotation (+).



RN 63-42-3 HCAPLUS

CN D-Glucose, 4-O-β-D-galactopyranosyl- (9CI) (CA INDEX NAME)

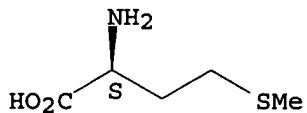
Absolute stereochemistry. Rotation (+).



RN 63-68-3 HCAPLUS

CN L-Methionine (9CI) (CA INDEX NAME)

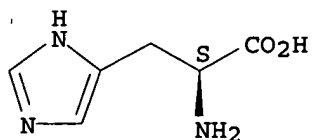
Absolute stereochemistry.



RN 71-00-1 HCAPLUS

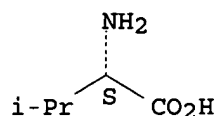
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



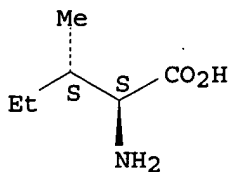
RN 72-18-4 HCAPLUS
CN L-Valine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



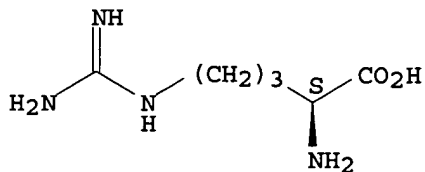
RN 73-32-5 HCAPLUS
CN L-Isoleucine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



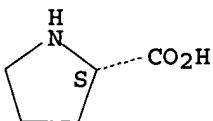
RN 74-79-3 HCAPLUS
CN L-Arginine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



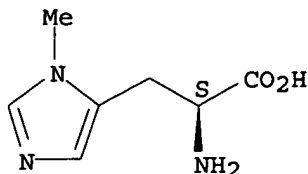
RN 147-85-3 HCAPLUS
CN L-Proline (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

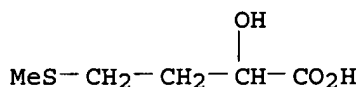


RN 368-16-1 HCAPLUS
CN L-Histidine, 3-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 583-91-5 352708-35-1, Rhodimet at 88
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
 (diets with differing amts. of protein and methionine hydroxy analog
 effects on adaptations in body muscle and fat in transition Holstein
 dairy cows)
 RN 583-91-5 HCAPLUS
 CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



RN 352708-35-1 HCAPLUS
 CN Rhodimet AT 88 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 4 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:590714 HCAPLUS

DOCUMENT NUMBER: 139:148557

TITLE: Protease catalyzed enantioselective oligomerization of
 α -hydroxy carboxylic acids and α -amino
 acids

INVENTOR(S): Lorbert, Stephen J.; Schasteen, Charles S.; Nam, Paul
 K.S.; Forciniti, Daniel; Rajesh, Mathur P.; Kapila,
 Shubhender

PATENT ASSIGNEE(S): Novus International, Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 103 pp., Cont.-in-part of U.S.
 Ser. No. 699,946.
 CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003143661	A1	20030731	US 2002-136974	20020502
US 6605590	B1	20030812	US 2000-699946	20001030
US 2004048347	A1	20040311	US 2003-609825	20030630
PRIORITY APPLN. INFO.:			US 1999-162725P	P 19991029
			US 2000-699946	A2 20001030
			US 2001-288196P	P 20010502

OTHER SOURCE(S): MARPAT 139:148557

AB An enzymic synthesis and composition of oligomers and co-oligomers comprised of
 α -hydroxy carboxylic acids and α -amino acids or peptides is

disclosed. In a preferred embodiment, a α -hydroxy carboxylic acid with a specific chiral configuration is linked by an amide linkage to a α -amino acid specific with a specific chiral configuration or linked by an amide linkage to a peptide made up of α -amino acid monomers having identical chiral configurations. Proteolytic enzymes catalyze oligomerization of the α -hydroxy carboxylic acid and α -amino acid. The degree and distribution of oligomerization varies upon the type and concns. of different reaction mixts. utilized and upon the length of allowed reaction time. The resultant oligomers may be provided to animals such as ruminants as bioavailable amino acid supplements that are resistant to degradation in the rumen and other animals such as swine, poultry and aquatic animals.

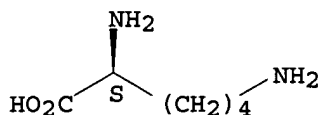
IT 25104-18-1, Polylysine 38000-06-5, Polylysine
 RL: BCP (Biochemical process); CAT (Catalyst use); BIOL (Biological study); PROC (Process); USES (Uses)
 (oligomeric; protease catalyzed enantioselective oligomerization of α -hydroxy carboxylic acids and α -amino acids)
 RN 25104-18-1 HCAPLUS
 CN L-Lysine, homopolymer (9CI) (CA INDEX NAME)

CM 1

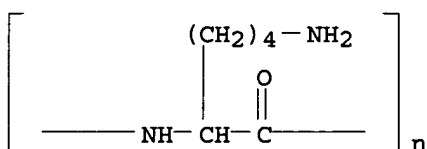
CRN 56-87-1

CMF C6 H14 N2 O2

Absolute stereochemistry.



RN 38000-06-5 HCAPLUS
 CN Poly[imino[(1S)-1-(4-aminobutyl)-2-oxo-1,2-ethanediyl]] (9CI) (CA INDEX NAME)

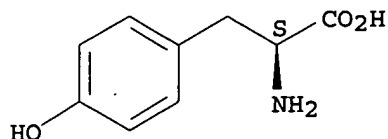


IT 25619-78-7P, Polytyrosine 25667-16-7P, Polytyrosine
 26062-47-5P, Poly methionine 26854-80-8P, Poly
 methionine 27813-82-7P, Polytryptophan 33540-31-7P,
 Polytryptophan 52703-96-5P 569681-73-8P
 569681-74-9P 569681-80-7P 569681-81-8P
 569681-82-9P 569681-83-0P 569681-84-1P
 569681-85-2P
 RL: BPN (Biosynthetic preparation); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)
 (oligomeric; protease catalyzed enantioselective oligomerization of α -hydroxy carboxylic acids and α -amino acids)
 RN 25619-78-7 HCAPLUS
 CN L-Tyrosine, homopolymer (9CI) (CA INDEX NAME)

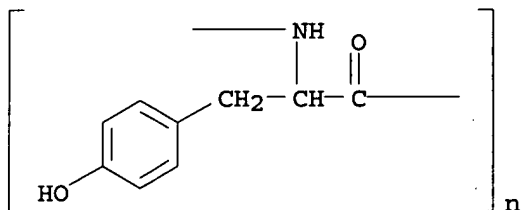
CM 1

CRN 60-18-4
CMF C9 H11 N O3

Absolute stereochemistry. Rotation (-).



RN 25667-16-7 HCAPLUS
CN Poly[imino[(1S)-1-[(4-hydroxyphenyl)methyl]-2-oxo-1,2-ethanediyl]] (9CI)
(CA INDEX NAME)

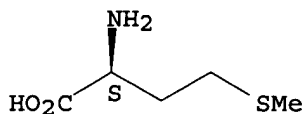


RN 26062-47-5 HCAPLUS
CN L-Methionine, homopolymer (9CI) (CA INDEX NAME)

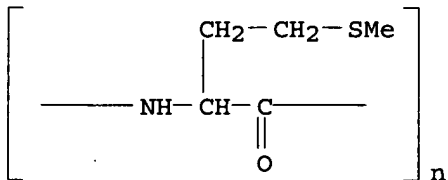
CM 1

CRN 63-68-3
CMF C5 H11 N O2 S

Absolute stereochemistry.



RN 26854-80-8 HCAPLUS
CN Poly[imino[(1S)-1-[2-(methylthio)ethyl]-2-oxo-1,2-ethanediyl]] (9CI) (CA INDEX NAME)



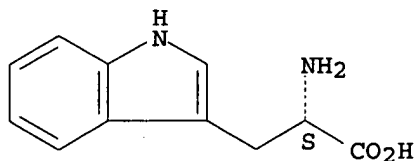
RN 27813-82-7 HCAPLUS
CN L-Tryptophan, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 73-22-3

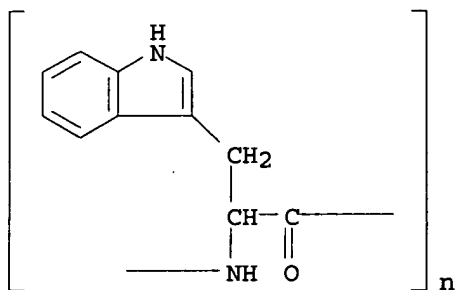
CMF C11 H12 N2 O2

Absolute stereochemistry.



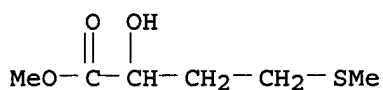
RN 33540-31-7 HCAPLUS

CN Poly[imino[(1S)-1-(1H-indol-3-ylmethyl)-2-oxo-1,2-ethanediyl]] (9CI) (CA INDEX NAME)



RN 52703-96-5 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)-, methyl ester (9CI) (CA INDEX NAME)



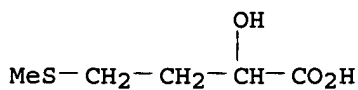
RN 569681-73-8 HCAPLUS

CN L-Lysine, polymer with 2-hydroxy-4-(methylthio)butanoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 583-91-5

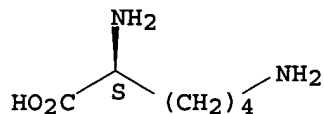
CMF C5 H10 O3 S



CM 2

CRN 56-87-1
CMF C6 H14 N2 O2

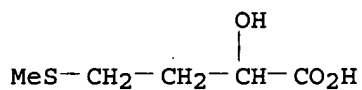
Absolute stereochemistry.



RN 569681-74-9 HCAPLUS
CN L-Tyrosine, polymer with 2-hydroxy-4-(methylthio)butanoic acid (9CI) (CA INDEX NAME)

CM 1

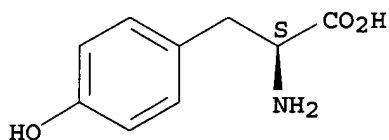
CRN 583-91-5
CMF C5 H10 O3 S



CM 2

CRN 60-18-4
CMF C9 H11 N O3

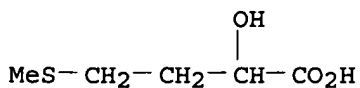
Absolute stereochemistry. Rotation (-).



RN 569681-80-7 HCAPLUS
CN L-Tryptophan, polymer with 2-hydroxy-4-(methylthio)butanoic acid (9CI) (CA INDEX NAME)

CM 1

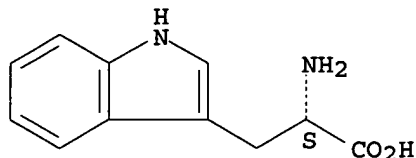
CRN 583-91-5
CMF C5 H10 O3 S



CM 2

CRN 73-22-3
CMF C11 H12 N2 O2

Absolute stereochemistry.

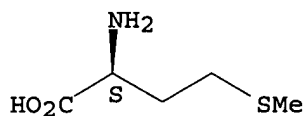


RN 569681-81-8 HCAPLUS
CN L-Methionine, polymer with 2-hydroxypropanoic acid (9CI) (CA INDEX NAME)

CM 1

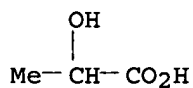
CRN 63-68-3
CMF C5 H11 N O2 S

Absolute stereochemistry.



CM 2

CRN 50-21-5
CMF C3 H6 O3

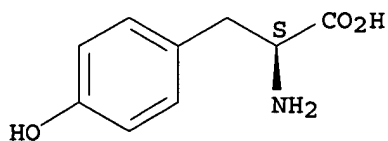


RN 569681-82-9 HCAPLUS
CN L-Tyrosine, polymer with 2-hydroxypropanoic acid (9CI) (CA INDEX NAME)

CM 1

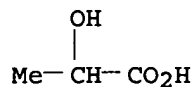
CRN 60-18-4
CMF C9 H11 N O3

Absolute stereochemistry. Rotation (-).



CM 2

CRN 50-21-5
CMF C3 H6 O3

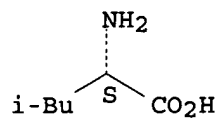


RN 569681-83-0 HCAPLUS
CN L-Leucine, polymer with 2-hydroxypropanoic acid (9CI) (CA INDEX NAME)

CM 1

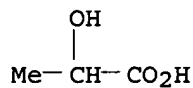
CRN 61-90-5
CMF C6 H13 N O2

Absolute stereochemistry. Rotation (+).



CM 2

CRN 50-21-5
CMF C3 H6 O3

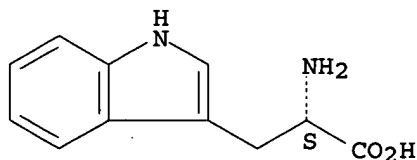


RN 569681-84-1 HCAPLUS
CN L-Tryptophan, polymer with 2-hydroxypropanoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 73-22-3
CMF C11 H12 N2 O2

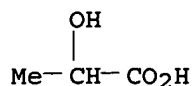
Absolute stereochemistry.



CM 2

CRN 50-21-5

CMF C3 H6 O3



RN 569681-85-2 HCAPLUS

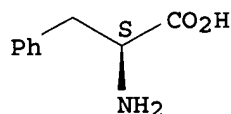
CN L-Phenylalanine, polymer with 2-hydroxypropanoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 63-91-2

CMF C9 H11 N O2

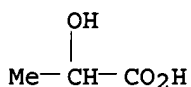
Absolute stereochemistry. Rotation (-).



CM 2

CRN 50-21-5

CMF C3 H6 O3

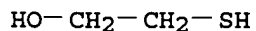


IT 60-24-2, Mercaptoethanol 96-80-0 108-88-3,
Toluene, processes 111-65-9, Octane, processes 577-11-7
, Aot 755-23-7 19961-27-4, Isopropyl ethylamine
25322-68-3, Peg

RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process)
(protease catalyzed enantioselective oligomerization of α -hydroxy
carboxylic acids and α -amino acids)

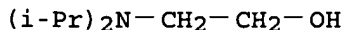
RN 60-24-2 HCAPLUS

CN Ethanol, 2-mercapto- (8CI, 9CI) (CA INDEX NAME)



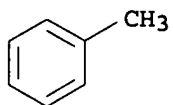
RN 96-80-0 HCAPLUS

CN Ethanol, 2-[bis(1-methylethyl)amino]- (9CI) (CA INDEX NAME)

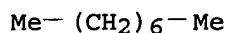


RN 108-88-3 HCAPLUS

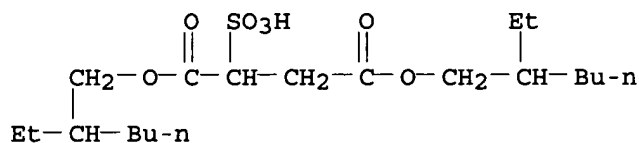
CN Benzene, methyl- (9CI) (CA INDEX NAME)



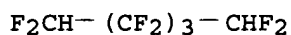
RN 111-65-9 HCAPLUS
CN Octane (8CI, 9CI) (CA INDEX NAME)



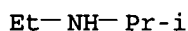
RN 577-11-7 HCAPLUS
CN Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt (9CI)
(CA INDEX NAME)



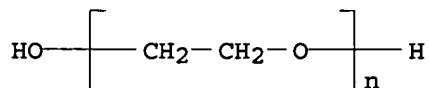
RN 755-23-7 HCAPLUS
CN Pentane, 1,1,2,2,3,3,4,4,5,5-decafluoro- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 19961-27-4 HCAPLUS
CN 2-Propanamine, N-ethyl- (9CI) (CA INDEX NAME)



RN 25322-68-3 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy- (9CI) (CA INDEX NAME)



IT 9001-62-1, Lipase 9001-73-4, Papain 9014-01-1,
Subtilisin 9032-68-2, Cathepsin C 9047-22-7, Cathepsin
B 71965-46-3, Cathepsin S 150977-36-9, Bromelain
RL: BCP (Biochemical process); CAT (Catalyst use); BIOL (Biological
study); PROC (Process); USES (Uses)

(protease catalyzed enantioselective oligomerization of α -hydroxy carboxylic acids and α -amino acids)

RN 9001-62-1 HCAPLUS
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9001-73-4 HCAPLUS
CN Papain (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9014-01-1 HCAPLUS
CN Subtilisin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9032-68-2 HCAPLUS
CN Cathepsin C (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9047-22-7 HCAPLUS
CN Cathepsin B (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 71965-46-3 HCAPLUS
CN Cathepsin S (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 150977-36-9 HCAPLUS
CN Bromelain (9CI) (CA INDEX NAME)

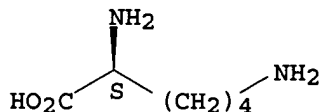
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 56-87-1, L-Lys, reactions 63-68-3, L-Methionine, reactions 97-64-3, Lactic acid ethyl ester 583-91-5D, 2-Hydroxy-4-(methylthio)butyric acid, and derivs. of 949-67-7, L-Tyrosine, ethyl ester 1080-06-4, L-Tyrosine, methyl ester 2743-60-4, L-Leucine, ethyl ester 3081-24-1, L-Phenylalanine, ethyl ester 3082-77-7, L-Methionine, ethyl ester 4117-33-3, L-Lysine, ethyl ester 4299-70-1, L-Tryptophan, methyl ester 7479-05-2, L-Tryptophan, ethyl ester 49540-17-2, 2-Hydroxy-4-(methylthio)butyric acid, ethyl ester 107998-44-7, D-Methionine ethyl ester 126873-66-3 126873-67-4

RL: BCP (Biochemical process); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)
(protease catalyzed enantioselective oligomerization of α -hydroxy carboxylic acids and α -amino acids)

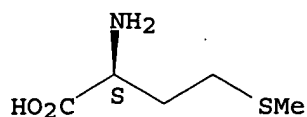
RN 56-87-1 HCAPLUS
CN L-Lysine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

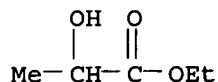


RN 63-68-3 HCAPLUS
CN L-Methionine (9CI) (CA INDEX NAME)

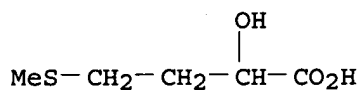
Absolute stereochemistry.



RN 97-64-3 HCAPLUS
 CN Propanoic acid, 2-hydroxy-, ethyl ester (9CI) (CA INDEX NAME)

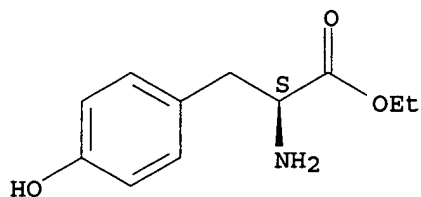


RN 583-91-5 HCAPLUS
 CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



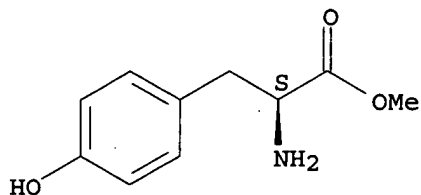
RN 949-67-7 HCAPLUS
 CN L-Tyrosine, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



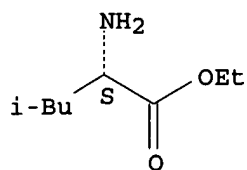
RN 1080-06-4 HCAPLUS
 CN L-Tyrosine, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 2743-60-4 HCAPLUS
 CN L-Leucine, ethyl ester (9CI) (CA INDEX NAME)

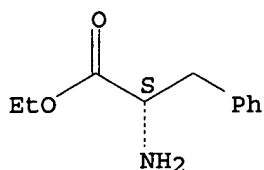
Absolute stereochemistry.



RN 3081-24-1 HCAPLUS

CN L-Phenylalanine, ethyl ester (9CI) (CA INDEX NAME)

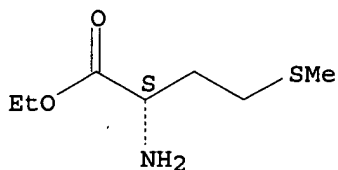
Absolute stereochemistry.



RN 3082-77-7 HCAPLUS

CN L-Methionine, ethyl ester (9CI) (CA INDEX NAME)

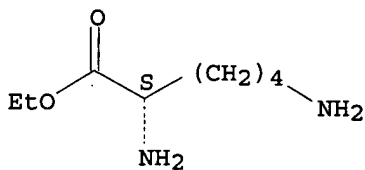
Absolute stereochemistry.



RN 4117-33-3 HCAPLUS

CN L-Lysine, ethyl ester (9CI) (CA INDEX NAME)

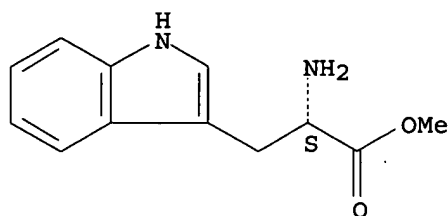
Absolute stereochemistry.



RN 4299-70-1 HCAPLUS

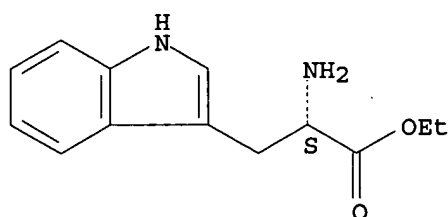
CN L-Tryptophan, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

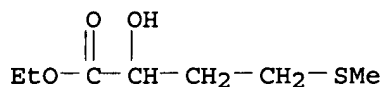


RN 7479-05-2 HCAPLUS
 CN L-Tryptophan, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

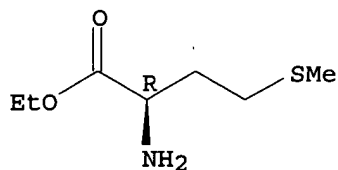


RN 49540-17-2 HCAPLUS
 CN Butanoic acid, 2-hydroxy-4-(methylthio)-, ethyl ester (9CI) (CA INDEX NAME)



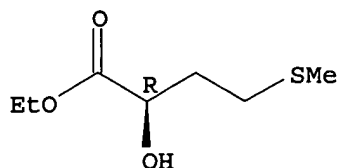
RN 107998-44-7 HCAPLUS
 CN D-Methionine, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 126873-66-3 HCAPLUS
 CN Butanoic acid, 2-hydroxy-4-(methylthio)-, ethyl ester, (2R)- (9CI) (CA INDEX NAME)

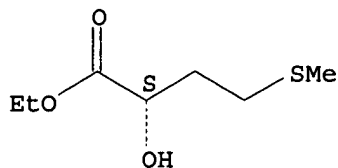
Absolute stereochemistry.



RN 126873-67-4 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)-, ethyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



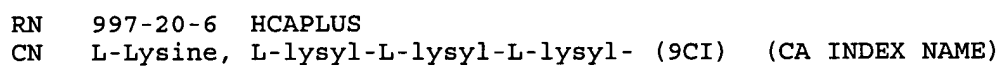
IT 554-38-1P, Hexalysine 997-20-6P, L-Lysyl-L-lysyl-L-lysyl-L-lysine 6934-38-9P, Hexatyrosine 7532-36-7P, Heptalysine 13184-13-9P, L-Lysyl-L-lysine 13184-14-0P, L-Lysyl-L-Lysyl-L-lysine 21657-52-3P, Nonalysine 21743-34-0P, Octalysine 51529-32-9P 57791-42-1P 59881-12-8P 62526-42-5P 62526-43-6P 62526-44-7P 89802-90-4P 99335-57-6P 101396-27-4P 136015-30-0P 474377-70-3P 474377-71-4P 474377-72-5P 474377-73-6P 474377-74-7P 474377-75-8P 474377-76-9P 569681-72-7P 569681-75-0P 569681-76-1P 569681-77-2P 569681-78-3P 569681-79-4P

RL: BPN (Biosynthetic preparation); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)
(protease catalyzed enantioselective oligomerization of α -hydroxy carboxylic acids and α -amino acids)

RN 554-38-1 HCAPLUS

CN L-Lysine, L-lysyl-L-lysyl-L-lysyl-L-lysyl-L-lysyl- (9CI) (CA INDEX NAME)

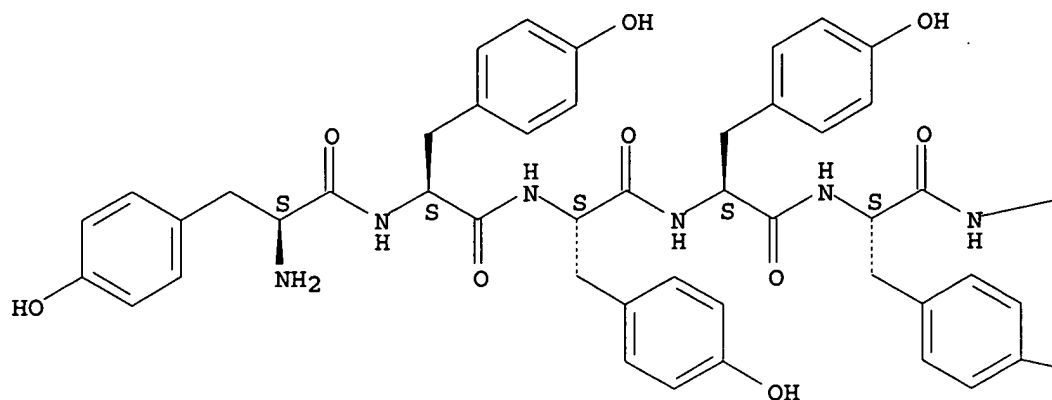
Absolute stereochemistry.



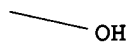
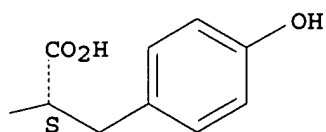
Chemical structure of 1,3-bis(4-aminobutylthio)urea, showing two 4-aminobutylthio groups attached to a central urea moiety. The structure includes stereochemical indicators: a wedge bond for the left sulfur atom and a dashed bond for the right sulfur atom.

Absolute stereochemistry.

PAGE 1-A

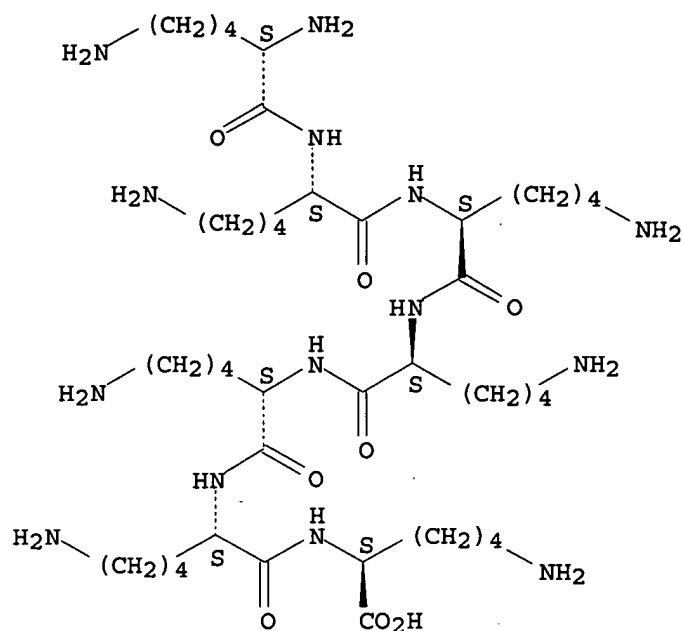


PAGE 1-B



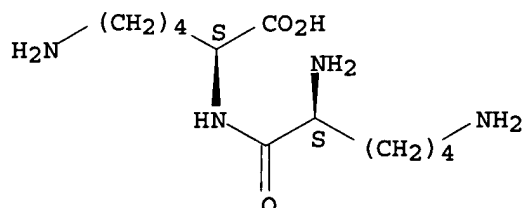
RN 7532-36-7 HCAPLUS
 CN L-Lysine, L-lysyl-L-lysyl-L-lysyl-L-lysyl-L-lysyl-L-lysyl- (9CI) (CA
 INDEX NAME)

Absolute stereochemistry.



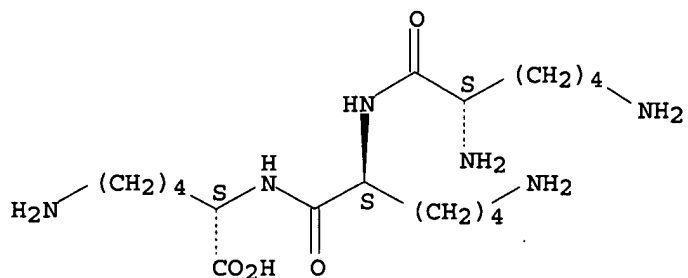
RN 13184-13-9 HCAPLUS
CN L-Lysine, L-lysyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 13184-14-0 HCAPLUS
CN L-Lysine, L-lysyl-L-lysyl- (9CI) (CA INDEX NAME)

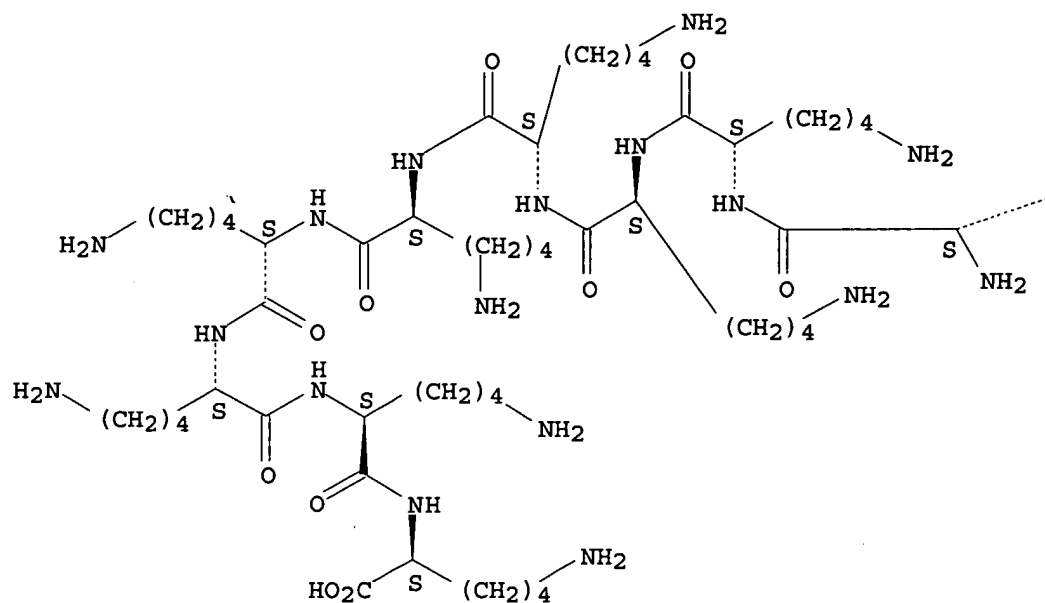
Absolute stereochemistry.



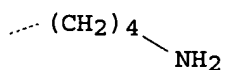
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RN      21657-52-3  HCAPLUS
CN      L-Lysine, L-lysyl-L-lysyl-L-lysyl-L-lysyl-L-lysyl-L-lysyl-L-lysyl-
(9CI)   (CA INDEX NAME)
```

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

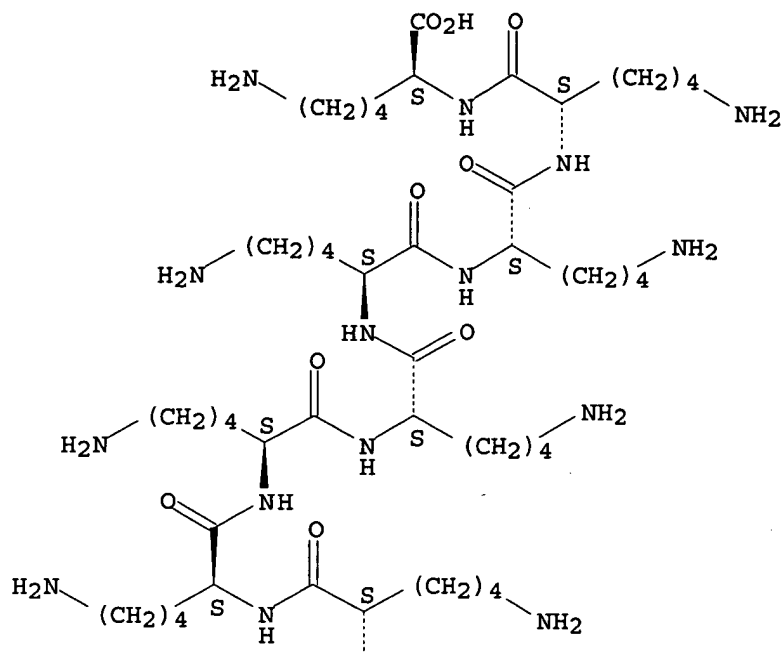


RN 21743-34-0 HCAPLUS

CN L-Lysine, L-lysyl-L-lysyl-L-lysyl-L-lysyl-L-lysyl-L-lysyl-L-lysyl- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



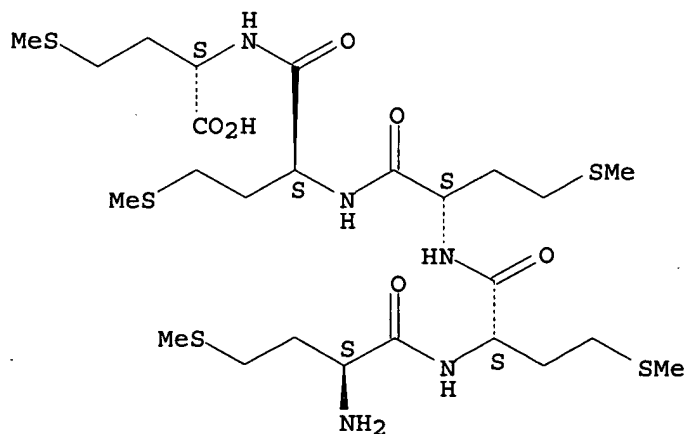
PAGE 2-A

NH₂

RN 51529-32-9 HCAPLUS

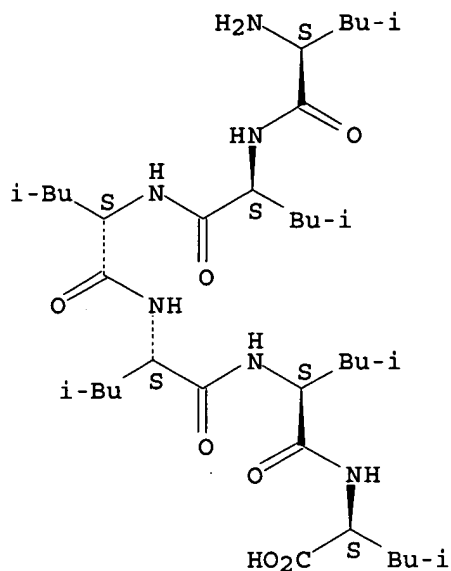
CN L-Methionine, L-methionyl-L-methionyl-L-methionyl-L-methionyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



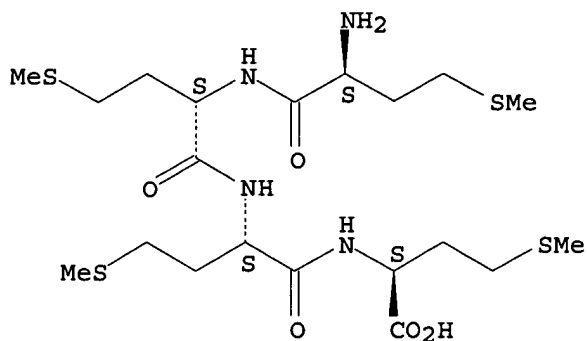
RN 57791-42-1 HCAPLUS
 CN L-Leucine, L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



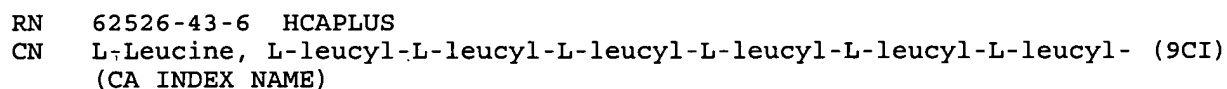
RN 59881-12-8 HCAPLUS
 CN L-Methionine, L-methionyl-L-methionyl-L-methionyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



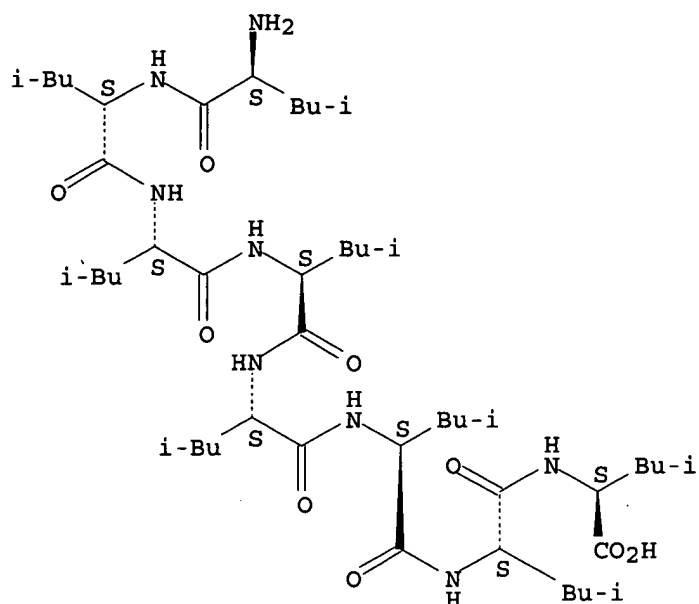
RN 62526-42-5 HCAPLUS
 CN L-Leucine, L-leucyl-L-leucyl-L-leucyl-L-leucyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



Chemical structure of a cyclic peptide derivative, specifically a cyclic hexapeptide with a carboxylic acid group. The structure is shown in a zig-zag conformation. The backbone consists of six amide bonds forming a ring. The side chains are isobutyl groups (i-Bu) attached to the nitrogen atoms of the amide bonds. The carboxylic acid group (CO₂H) is attached to the α-carbon of one of the residues. Stereochemistry is indicated by wedged and dashed bonds.

Absolute stereochemistry.

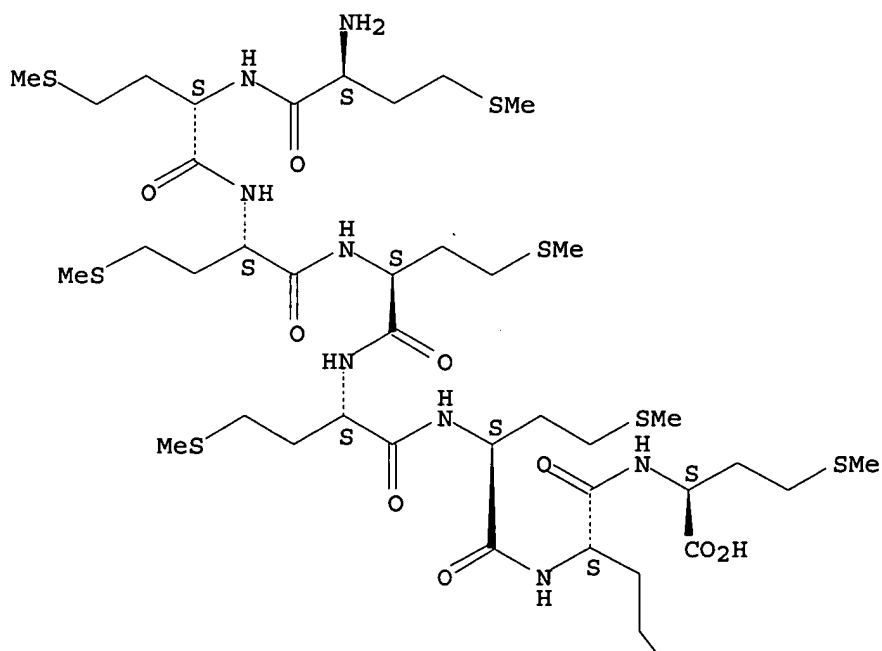


RN 89802-90-4 HCAPLUS

CN L-Methionine, L-methionyl-L-methionyl-L-methionyl-L-methionyl-L-methionyl-L-methionyl-L-methionyl- (9CI) (CA INDEX NAME)

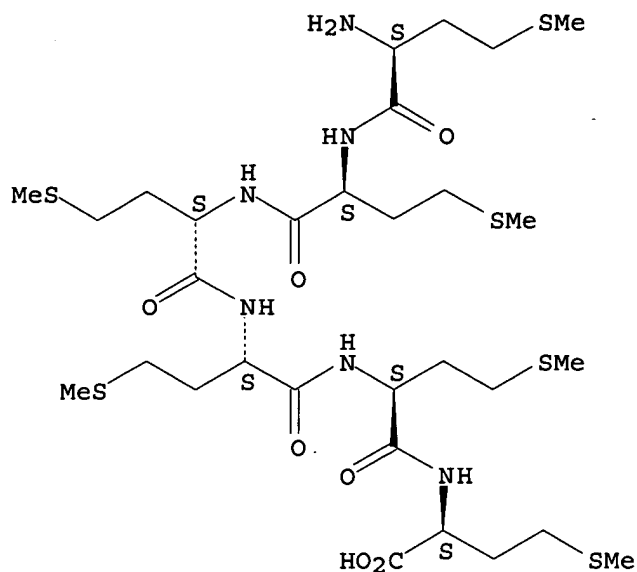
Absolute stereochemistry.

PAGE 1-A

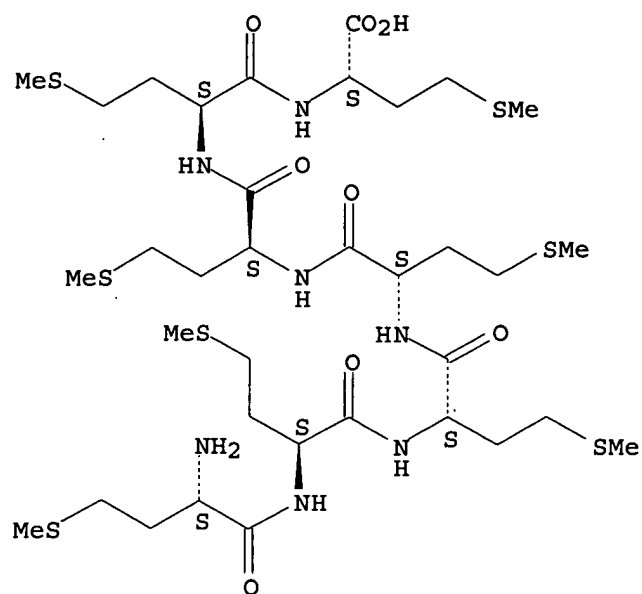


SMe

Absolute stereochemistry.



Absolute stereochemistry.

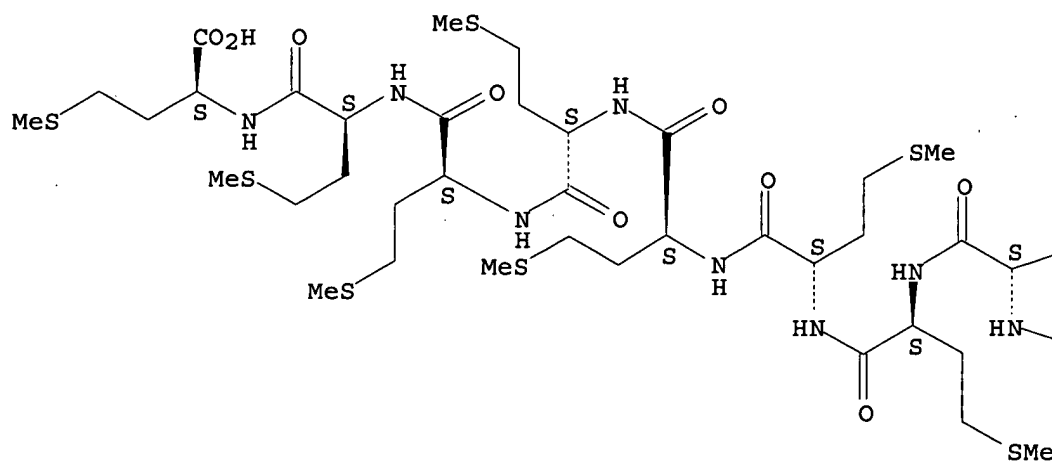


RN 136015-30-0 HCAPLUS

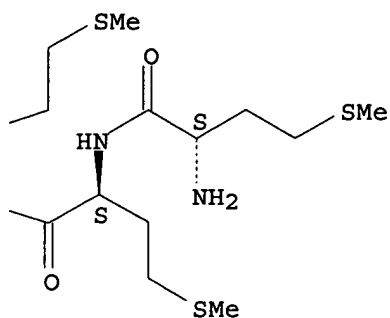
CN L-Methionine, L-methionyl-L-methionyl-L-methionyl-L-methionyl-L-methionyl-L-methionyl-L-methionyl-L-methionyl-L-methionyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



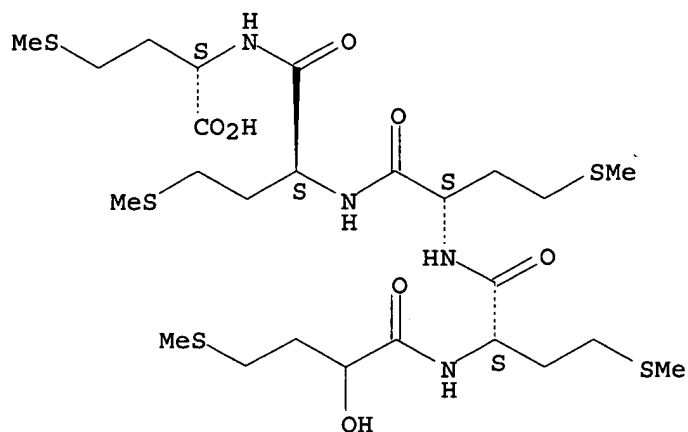
PAGE 1-B



RN 474377-70-3 HCAPLUS

CN L-Methionine, 2-hydroxy-4-(methylthio)butanoyl-L-methionyl-L-methionyl-L-methionyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

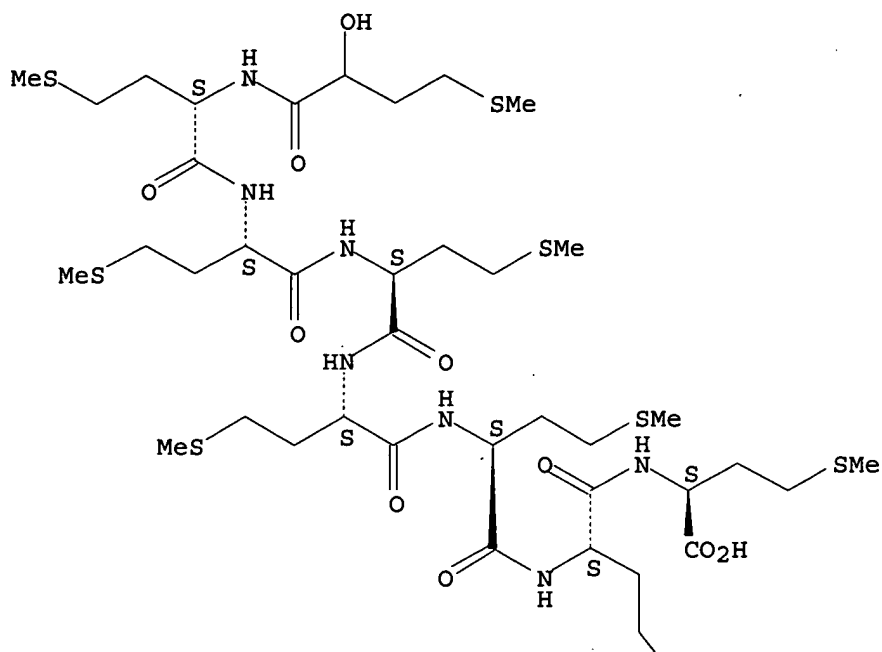


RN 474377-71-4 HCAPLUS

CN L-Methionine, 2-hydroxy-4-(methylthio)butanoyl-L-methionyl-L-methionyl-L-methionyl-L-methionyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



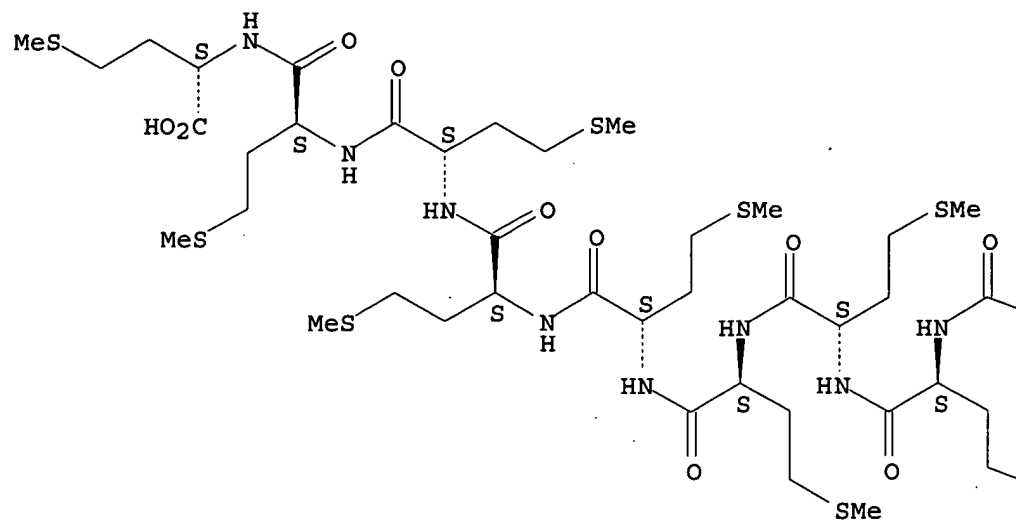
PAGE 2-A



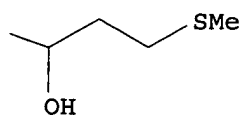
RN 474377-74-7 HCAPLUS
 CN L-Methionine, 2-hydroxy-4-(methylthio)butanoyl-L-methionyl-L-methionyl-L-methionyl-L-methionyl-L-methionyl-L-methionyl-L-methionyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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PAGE 1-B

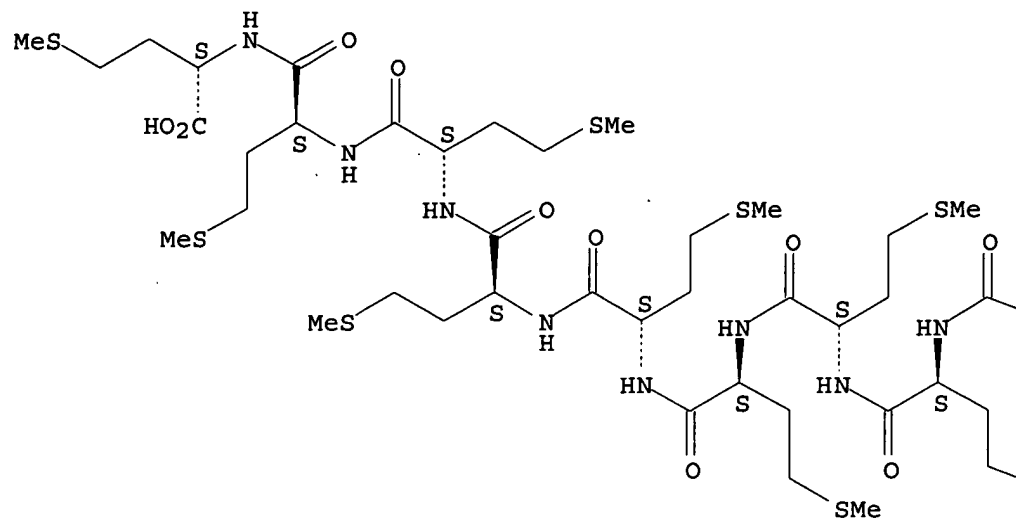


RN 474377-75-8 HCAPLUS

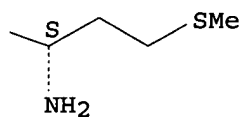
CN L-Methionine, L-methionyl-L-methionyl-L-methionyl-L-methionyl-L-methionyl-L-methionyl-L-methionyl-L-methionyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

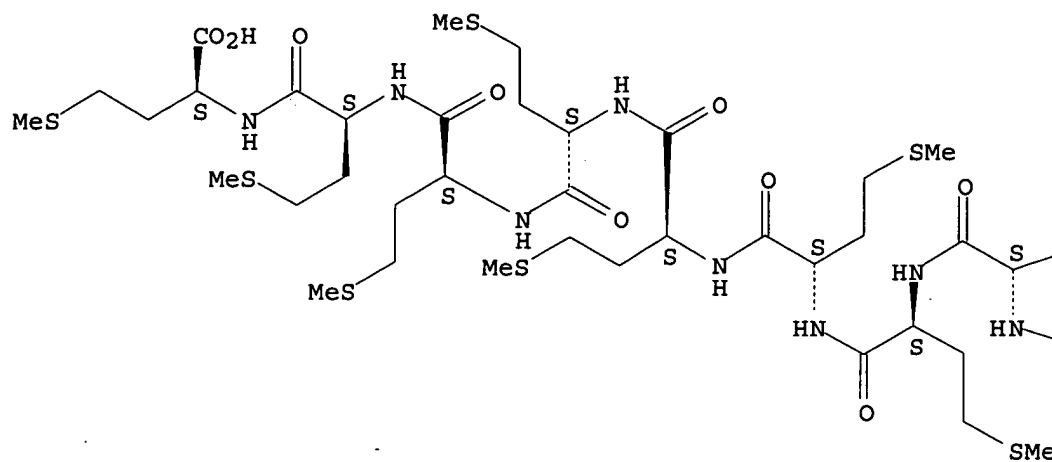


RN 474377-76-9 HCAPLUS

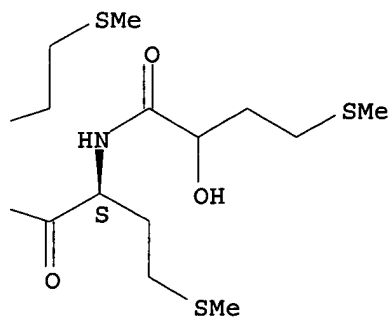
[illegible]

Absolute stereochemistry.

PAGE 1-A



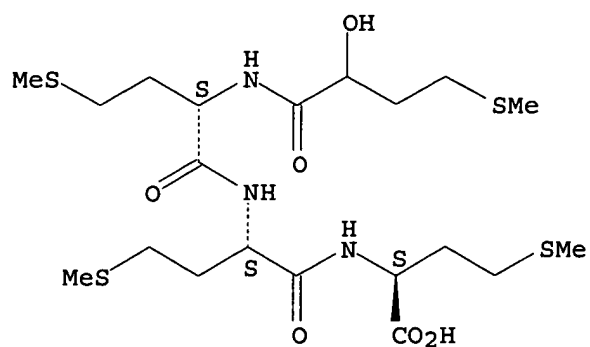
PAGE 1-B



RN 569681-72-7 HCAPLUS

CN L-Methionine, 2-hydroxy-4-(methylthio)butanoyl-L-methionyl-L-methionyl-
(9CI) (CA INDEX NAME)

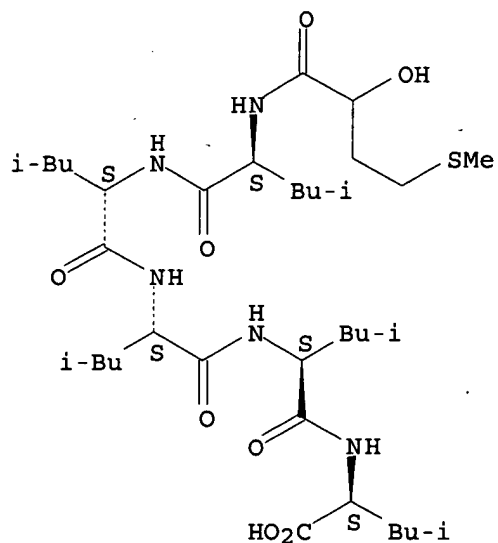
Absolute stereochemistry.



RN 569681-75-0 HCAPLUS

CN L-Leucine, 2-hydroxy-4-(methylthio)butanoyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl- (9CI) (CA INDEX NAME)

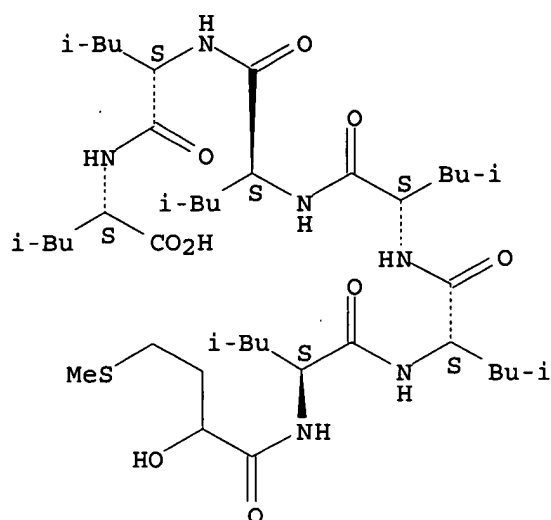
Absolute stereochemistry.



RN 569681-76-1 HCAPLUS

CN L-Leucine, 2-hydroxy-4-(methylthio)butanoyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl- (9CI) (CA INDEX NAME)

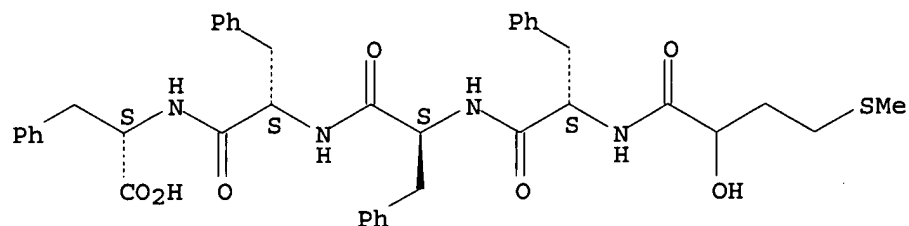
Absolute stereochemistry.



RN 569681-77-2 HCAPLUS

CN L-Phenylalanine, 2-hydroxy-4-(methylthio)butanoyl-L-phenylalanyl-L-phenylalanyl-L-phenylalanyl- (9CI) (CA INDEX NAME)

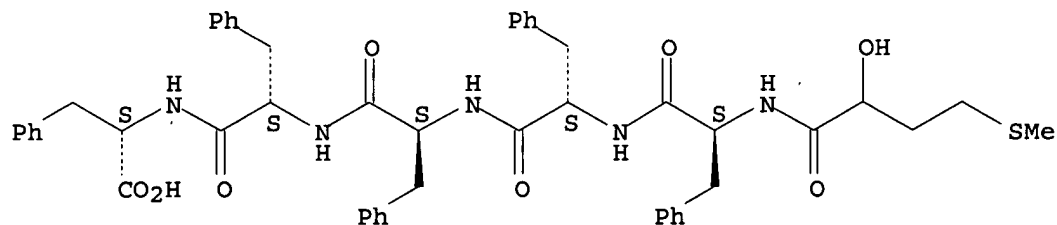
Absolute stereochemistry.



RN 569681-78-3 HCAPLUS

CN L-Phenylalanine, 2-hydroxy-4-(methylthio)butanoyl-L-phenylalanyl-L-phenylalanyl-L-phenylalanyl-L-phenylalanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

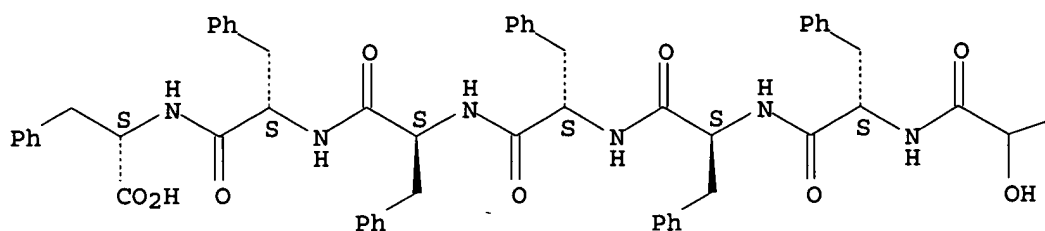


RN 569681-79-4 HCAPLUS

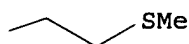
CN L-Phenylalanine, 2-hydroxy-4-(methylthio)butanoyl-L-phenylalanyl-L-phenylalanyl-L-phenylalanyl-L-phenylalanyl-L-phenylalanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



L45 ANSWER 5 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:428146 HCAPLUS

DOCUMENT NUMBER: 139:322807

TITLE: Effect of feeding methionine supplements with different rumen escape values on performance of high producing dairy cows in **early** lactation

AUTHOR(S): Uchida, K.; Mandevvu, P.; Ballard, C. S.; Sniffen, C. J.; Carter, M. P.

CORPORATE SOURCE: W.H. Miner Agricultural Research Institute, Chazy, NY, 12921-0090, USA

SOURCE: Animal Feed Science and Technology (2003), 107(1-4), 1-14

CODEN: AFSTDH; ISSN: 0377-8401

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

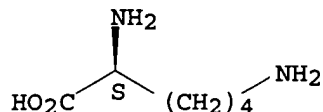
LANGUAGE: English

AB A study was undertaken to compare a liquid form of methionine hydroxy analog (MHA; Novus Intl., Atlanta, GA, USA) and d,l-methionine, two methionine supplements with different rumen degradation escape values, on **early** lactational and reproductive performance by high producing dairy cows. Forty pregnant Holstein cows housed in a free-stall barn, were blocked by parity, date of calving, and previous 305-day mature equivalent milk production,

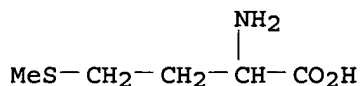
and at calving were assigned randomly to one of two total mixed rations (TMR) containing MHA, or d,l-methionine, and group-fed for ad libitum intake. Cows spent 33±15.0 days in the fresh group, after which they were moved to the high producing group where they stayed up to 8-wk postpartum. The TMR were formulated to meet approx. 100% of required methionine, lysine, and other essential amino acids. An adequate amount of d,l-methionine was fed in order to provide a similar amount of methionine postruminally as provided by MHA, assuming a rumen degradation escape value of 40% for MHA and 22% for d,l-methionine. The TMR had forage to concentrate ratio of 40 to 60% for fresh group cows and 42 to 58% for high group cows. There were no differences between treatments in milk yield, content of milk fat, CP and true protein, linear somatic cell count, change in body condition score, and days to first service. In conclusion, d,l-methionine performed as well as MHA in promoting milk yield and contents of milk fat and protein when fed at levels aimed at supplying similar amts. of methionine postruminally as would be supplied by MHA fed at the recommended level.

IT 56-87-1, L-Lysine, biological studies 59-51-8,
Methionine 63-68-3, L-Methionine, biological studies
583-91-5
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(effect of feeding Met supplements with different rumen escape values
on performance of high producing dairy cows in early
lactation)
RN 56-87-1 HCAPLUS
CN L-Lysine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

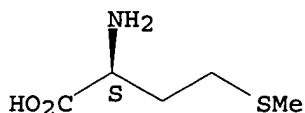


RN 59-51-8 HCAPLUS
CN Methionine (9CI) (CA INDEX NAME)

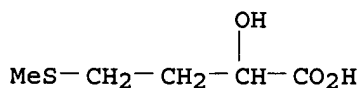


RN 63-68-3 HCAPLUS
CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 583-91-5 HCAPLUS
CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 6 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:781398 HCAPLUS

DOCUMENT NUMBER: 138:267716

TITLE: Effect of enhanced UV-B radiation on polyamine
metabolism and endogenous hormone contents in rice
(Oryza sativa L.)

AUTHOR(S): Lin, Wenxiong; Wu, Xingchun; Linag, Kangjing; Guo,
Yuchun; He, Huaqin; Chen, Fangyu; Liang, Yiyuan

CORPORATE SOURCE: School of Life Science, Fujian Agriculture and
Forestry University, Fuzhou, 350002, Peop. Rep. China

SOURCE: Yingyong Shengtai Xuebao (2002), 13(7), 807-813
CODEN: YSXUER; ISSN: 1001-9332
PUBLISHER: Yingyong Shengtai Xuebao Bianji Weiyuanhui
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB The studies showed that the activities of Arginine decarboxylase (ADC), Ornithine decarboxylase (ODC) and s-Adenosylmethionine decarboxylase (SAMDC) were increased by 165.74%, 104.60% and 89.60% in the leaves of Shan You63 (Sy63) and by 59.91%, 41.30% and 23.68% in the leaves of Nancheum (NC). Only ADC and ODC activities were increased by 115.93%, 14.45%, but SAMDC activity was decreased by 33.01% in the leaves of IR65600-85 resp. in the exposure to enhanced UV-B radiation for 7.apprx.14 days. In late treatment time course(21.apprx.28 days), the activities of ADC and ODC were increased by 89.72% and 3.71% in the leaves of Sy63 exposed to UV-B radiation for 21.apprx.28 days and by 73.95% and 27.38% in the leaves of NC. The activity of ADC was also increased by 94.41%, but ODC activity was decreased by 13.57% in the leaves of IR65600-85 compared with the controls. As far as SAMDC was concerned, the enzymic activities in the leaves of Sy63, NC and IR65600-85 were reduced by 40.06%, 19.20% and 38.21% resp. in the exposure to enhanced UV-B radiation for 21.apprx.28 days. The reverse was true in the case of Polyamine Oxidase (PAO), this in turn resulted in increased contents of Polyamine (PA) especially putrescine (Put). In addition, the result

also indicated that the contents of IAA and GA1/3 were significantly reduced in all rice cultivars used for this expts. with enhanced UV-B radiation treatments for 7.apprx.28 days, in which the contents of IAA and GA1/3 were decreased by 58.92% and 45.48% in the leaves of Sy63, by 43.31% and 56.20% in the leaves of NC, and by 38.60% and 47.33% in the leaves of IR65600-85. The contents of ZRs in the leaves of the three cultivars concerned were lower in earlier treatment time courses (7.apprx.14 days), but much higher in late courses(21.apprx.28 days) compared with the their counter-parts. With regard to the endogenous hormone of ABA, the content was significantly increased by 14.4%, 99.6% and 56.7% resp. in the three rice cultivars concerned exposed to enhanced UV-B radiation for 7.apprx.28 days, thereby led to decreased values of IAA/ABA, GA1/3/ABA and ZRs/ABA, consequently suppressed growth and development of rice.

IT 9024-60-6, Ornithine decarboxylase 9024-77-5, Arginine decarboxylase 9036-20-8, S-Adenosylmethionine decarboxylase 294646-71-2, Polyamine Oxidase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(effect of enhanced UV-B radiation on polyamine metabolism and endogenous hormone contents in rice (Oryza sativa L.))
RN 9024-60-6 HCAPLUS
CN Decarboxylase, ornithine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9024-77-5 HCAPLUS
CN Decarboxylase, arginine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9036-20-8 HCAPLUS
CN Decarboxylase, adenosylmethionine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 294646-71-2 HCAPLUS
CN Oxidase, polyamine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L45 ANSWER 7 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:315123 HCAPLUS

DOCUMENT NUMBER: 136:324175

TITLE: Production of α -hydroxy-carboxylic acids using a coupled enzyme system

INVENTOR(S): Senkpeil, Richard F.; Pantaleone, David P.; Taylor, Paul P.

PATENT ASSIGNEE(S): PCBU Services, Inc., USA

SOURCE: PCT Int. Appl., 32 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002033110	A2	20020425	WO 2001-US32243	20011017
WO 2002033110	A3	20030213		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002015360	A5	20020429	AU 2002-15360	20011017
EP 1326993	A2	20030716	EP 2001-983974	20011017
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004511249	T2	20040415	JP 2002-536078	20011017
US 2004053382	A1	20040318	US 2003-433835	20030609
PRIORITY APPLN. INFO.:			US 2000-241177P	P 20001017
			WO 2001-US32243	W 20011017

OTHER SOURCE(S): CASREACT 136:324175; MARPAT 136:324175

AB An economical and expedient method is disclosed for the preparation of α -hydroxy-carboxylic acids or salts thereof in very high enantiomeric purity which comprises oxidizing a corresponding α -amino-carboxylic acid or salt thereof using an amino acid deaminase followed by reducing the corresponding α -keto-carboxylic acid or salt produced using a D- or L-lactate dehydrogenase in the combination with an electron donor and an enzyme/substrate system for recycling the electron donor. The resulting α -hydroxy-carboxylic acids, hydrates, and salts thereof are valuable components and intermediates in the preparation of chiral compds., especially pharmaceuticals. This invention also relates to the use of α -amino-carboxylic acids, hydrates, and salts thereof and a coupled enzyme system in the production of α -hydroxy-carboxylic acids, hydrates, and salts thereof. Thus, D-2-hydroxy-4-methylpentanoic acid was produced from L-leucine by oxidative deamination employing a recombinant Escherichia coli containing the gene which encodes for L-amino acid oxidase. When this first reaction was completed, the cells were removed by centrifugation and the reaction product in the supernatant was converted to D-2-hydroxy-4-methylpentanoic acid by a D-lactate dehydrogenase with and enantiomeric excess >99% and a yield of 60% from L-leucine.

IT 9000-89-9, L-Amino acid oxidase 9001-60-9, L-Lactate

dehydrogenase 9028-36-8, D-Lactate dehydrogenase
9028-85-7, Formate dehydrogenase 9029-13-4, L-Amino acid
deaminase

RL: BCP (Biochemical process); CAT (Catalyst use); BIOL (Biological
study); PROC (Process); USES (Uses)

(production of α -hydroxy-carboxylic acids using coupled enzyme
system)

RN 9000-89-9 HCAPLUS

CN Oxidase, L-amino acid (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9001-60-9 HCAPLUS

CN Dehydrogenase, lactate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9028-36-8 HCAPLUS

CN Dehydrogenase, D-lactate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9028-85-7 HCAPLUS

CN Dehydrogenase, formate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9029-13-4 HCAPLUS

CN Dehydrogenase, L-amino acid (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 53-84-9, NAD 61-90-5, L-Leucine, reactions
63-91-2, L-Phenylalanine, reactions 141-53-7, Sodium
formate 6600-40-4, Norvaline 7782-44-7, Oxygen,
reactions

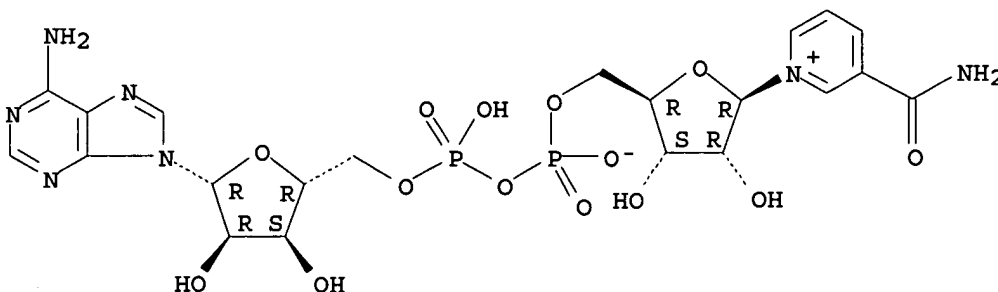
RL: BCP (Biochemical process); RCT (Reactant); BIOL (Biological study);
PROC (Process); RACT (Reactant or reagent)

(production of α -hydroxy-carboxylic acids using coupled enzyme
system)

RN 53-84-9 HCAPLUS

CN Adenosine 5'-(trihydrogen diphosphate), P' \rightarrow 5'-ester with
3-(aminocarbonyl)-1- β -D-ribofuranosylpyridinium, inner salt (9CI)
(CA INDEX NAME)

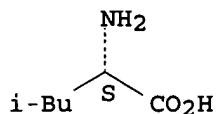
Absolute stereochemistry.



RN 61-90-5 HCAPLUS

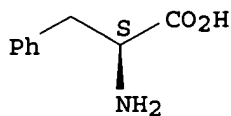
CN L-Leucine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 63-91-2 HCAPLUS
CN L-Phenylalanine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



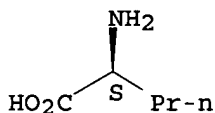
RN 141-53-7 HCAPLUS
CN Formic acid, sodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

RN 6600-40-4 HCAPLUS
CN L-Norvaline (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 7782-44-7 HCAPLUS
CN Oxygen (8CI, 9CI) (CA INDEX NAME)



IT 3347-90-8P, Butanoic acid, 2-hydroxy-, (2S)- 6000-40-4P
7326-19-4P 7417-65-4P, (2S)-2-Hydroxy-3-indoylpropanoic
acid 13095-47-1P, (R)-α-Hydroxyglutaric acid
13095-48-2P, (S)-α-Hydroxyglutaric acid 13748-90-8P
17407-55-5P 17407-56-6P 20016-85-7P,
(R)-2-Hydroxybutanoic acid 20312-36-1P 20312-37-2P,
D-2-Hydroxy-4-methylpentanoic acid 23508-35-2P
24809-83-4P, D-2-Hydroxypentanoic acid 28305-26-2P
29678-81-7P 30163-02-1P 30163-03-2P
39638-34-1P 41014-93-1P, (S)-2-Hydroxypentanoic acid
43201-07-6P 48042-96-2P 61505-41-7P
70267-26-4P, (S)-2-Hydroxyhexanoic acid 77252-44-9P,
(2R)-2-Hydroxyadipic acid 77252-45-0P, (2S)-2-Hydroxyadipic acid
82079-44-5P 89919-57-3P 103372-29-8P,

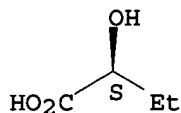
(2S)-2-Hydroxy-3-(1-naphthyl)-propanoic acid 114990-91-9P
 114990-92-0P, (2S)-2-Hydroxy-4,4-dimethylpentanoic acid
 115016-95-0P 124980-93-4P 124980-94-5P
 164453-92-3P 204119-59-5P 285980-15-6P,
 (2R)-2-Hydroxy-3-(1-naphthyl)-propanoic acid 387398-74-5P
 413622-10-3P, (R)-2-Hydroxy-4-pentenoic acid 413622-11-4P
 , (2S)-2-Hydroxy-3-(2-pyridyl)-propanoic acid 413622-12-5P,
 (2R)-2-Hydroxy-3-(2-pyridyl)-propanoic acid 413622-13-6P,
 (2R)-2-Hydroxy-3-(3-pyridyl)-propanoic acid 413622-14-7P,
 (2S)-2-Hydroxy-3-(3-pyridyl)-propanoic acid 413622-15-8P,
 (2S)-2-Hydroxy-3-(4-pyridyl)-propanoic acid 413622-16-9P,
 (2R)-2-Hydroxy-3-(2-naphthyl)-propanoic acid 413622-17-0P,
 (2S)-2-Hydroxy-3-(2-naphthyl)-propanoic acid 413622-19-2P,
 (2S)-2-Hydroxy-5-ureidovaleric acid 413622-20-5P,
 (2R)-2-Hydroxy-5-ureidovaleric acid 413622-21-6P,
 (2R)-2-Hydroxy-6-ureidonohexanoic acid 413622-22-7P
 413622-23-8P 413622-24-9P 413627-03-9P,
 (2R)-2-Hydroxy-3-(4-pyridyl)-propanoic acid

RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL
 (Biological study); PREP (Preparation)
 (production of α -hydroxy-carboxylic acids using coupled enzyme
 system)

RN 3347-90-8 HCAPLUS

CN Butanoic acid, 2-hydroxy-, (2S)- (9CI) (CA INDEX NAME)

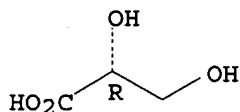
Absolute stereochemistry. Rotation (+).



RN 6000-40-4 HCAPLUS

CN Propanoic acid, 2,3-dihydroxy-, (2R)- (9CI) (CA INDEX NAME)

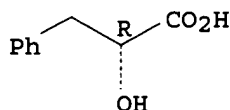
Absolute stereochemistry.



RN 7326-19-4 HCAPLUS

CN Benzenepropanoic acid, α -hydroxy-, (α R)- (9CI) (CA INDEX NAME)

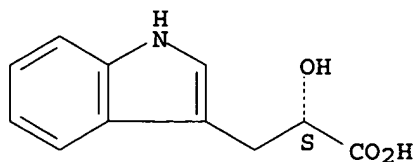
Absolute stereochemistry. Rotation (+).



RN 7417-65-4 HCAPLUS

CN 1H-Indole-3-propanoic acid, α -hydroxy-, (α S)- (9CI) (CA INDEX NAME)

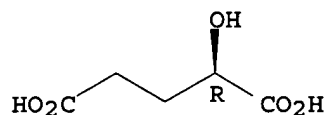
Absolute stereochemistry.



RN 13095-47-1 HCAPLUS

CN Pentanedioic acid, 2-hydroxy-, (2R)- (9CI) (CA INDEX NAME)

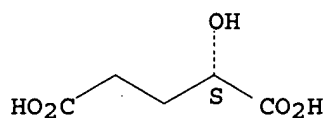
Absolute stereochemistry.



RN 13095-48-2 HCAPLUS

CN Pentanedioic acid, 2-hydroxy-, (2S)- (9CI) (CA INDEX NAME)

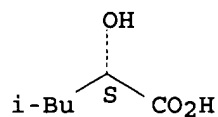
Absolute stereochemistry.



RN 13748-90-8 HCAPLUS

CN Pentanoic acid, 2-hydroxy-4-methyl-, (2S)- (9CI) (CA INDEX NAME)

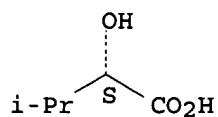
Absolute stereochemistry. Rotation (+).



RN 17407-55-5 HCAPLUS

CN Butanoic acid, 2-hydroxy-3-methyl-, (2S)- (9CI) (CA INDEX NAME)

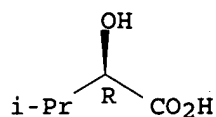
Absolute stereochemistry. Rotation (+).



RN 17407-56-6 HCAPLUS

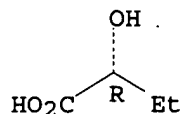
CN Butanoic acid, 2-hydroxy-3-methyl-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



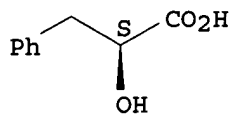
RN 20016-85-7 HCAPLUS
CN Butanoic acid, 2-hydroxy-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



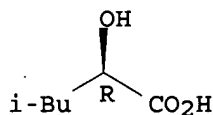
RN 20312-36-1 HCAPLUS
CN Benzenepropanoic acid, α -hydroxy-, (α S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



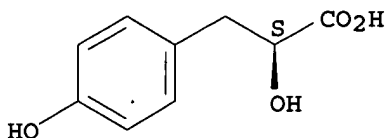
RN 20312-37-2 HCAPLUS
CN Pentanoic acid, 2-hydroxy-4-methyl-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



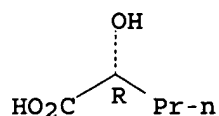
RN 23508-35-2 HCAPLUS
CN Benzenepropanoic acid, α ,4-dihydroxy-, (α S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 24809-83-4 HCAPLUS
CN Pentanoic acid, 2-hydroxy-, (2R)- (9CI) (CA INDEX NAME)

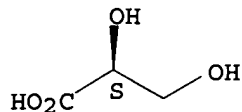
Absolute stereochemistry. Rotation (-).



RN 28305-26-2 HCAPLUS

CN Propanoic acid, 2,3-dihydroxy-, (2S)- (9CI) (CA INDEX NAME)

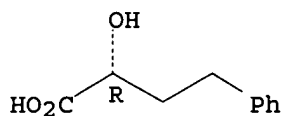
Absolute stereochemistry.



RN 29678-81-7 HCAPLUS

CN Benzenebutanoic acid, α -hydroxy-, (α R)- (9CI) (CA INDEX NAME)

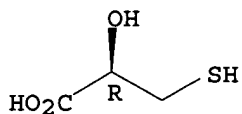
Absolute stereochemistry. Rotation (-).



RN 30163-02-1 HCAPLUS

CN Propanoic acid, 2-hydroxy-3-mercapto-, (2R)- (9CI) (CA INDEX NAME)

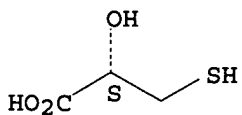
Absolute stereochemistry.



RN 30163-03-2 HCAPLUS

CN Propanoic acid, 2-hydroxy-3-mercapto-, (2S)- (9CI) (CA INDEX NAME)

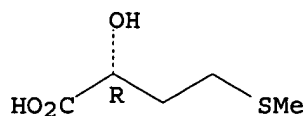
Absolute stereochemistry.



RN 39638-34-1 HCAPLUS

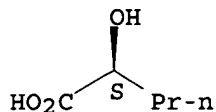
CN Butanoic acid, 2-hydroxy-4-(methylthio)-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



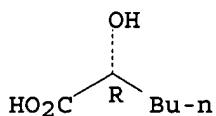
RN 41014-93-1 HCAPLUS
 CN Pentanoic acid, 2-hydroxy-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



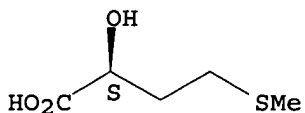
RN 43201-07-6 HCAPLUS
 CN Hexanoic acid, 2-hydroxy-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



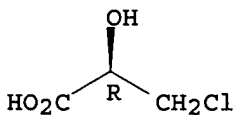
RN 48042-96-2 HCAPLUS
 CN Butanoic acid, 2-hydroxy-4-(methylthio)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



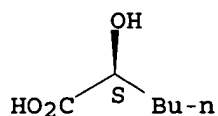
RN 61505-41-7 HCAPLUS
 CN Propanoic acid, 3-chloro-2-hydroxy-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 70267-26-4 HCAPLUS
 CN Hexanoic acid, 2-hydroxy-, (2S)- (9CI) (CA INDEX NAME)

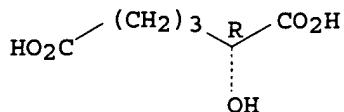
Absolute stereochemistry. Rotation (-).



RN 77252-44-9 HCAPLUS

CN Hexanedioic acid, 2-hydroxy-, (2R)- (9CI) (CA INDEX NAME)

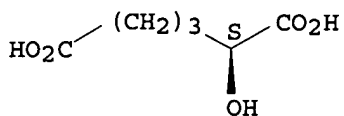
Absolute stereochemistry.



RN 77252-45-0 HCAPLUS

CN Hexanedioic acid, 2-hydroxy-, (2S)- (9CI) (CA INDEX NAME)

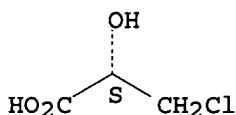
Absolute stereochemistry.



RN 82079-44-5 HCAPLUS

CN Propanoic acid, 3-chloro-2-hydroxy-, (2S)- (9CI) (CA INDEX NAME)

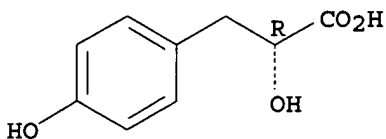
Absolute stereochemistry.



RN 89919-57-3 HCAPLUS

CN Benzenepropanoic acid, α,4-dihydroxy-, (αR)- (9CI) (CA INDEX NAME)

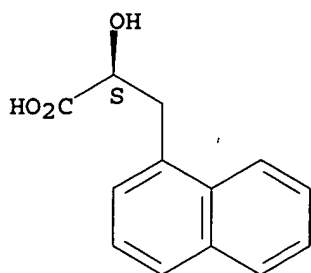
Absolute stereochemistry. Rotation (-).



RN 103372-29-8 HCAPLUS

CN 1-Naphthalenepropanoic acid, α-hydroxy-, (αS)- (9CI) (CA INDEX NAME)

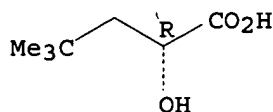
Absolute stereochemistry. Rotation (-).



RN 114990-91-9 HCAPLUS

CN Pentanoic acid, 2-hydroxy-4,4-dimethyl-, (2R)- (9CI) (CA INDEX NAME)

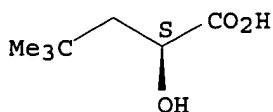
Absolute stereochemistry.



RN 114990-92-0 HCAPLUS

CN Pentanoic acid, 2-hydroxy-4,4-dimethyl-, (2S)- (9CI) (CA INDEX NAME)

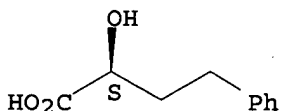
Absolute stereochemistry. Rotation (-).



RN 115016-95-0 HCAPLUS

CN Benzenebutanoic acid, α -hydroxy-, (α S)- (9CI) (CA INDEX NAME)

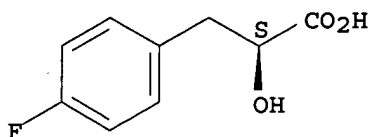
Absolute stereochemistry. Rotation (+).



RN 124980-93-4 HCAPLUS

CN Benzenepropanoic acid, 4-fluoro- α -hydroxy-, (α S)- (9CI) (CA INDEX NAME)

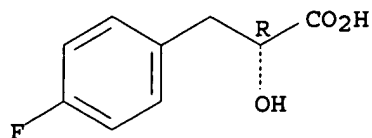
Absolute stereochemistry.



RN 124980-94-5 HCAPLUS

CN Benzenepropanoic acid, 4-fluoro- α -hydroxy-, (α R) - (9CI) (CA INDEX NAME)

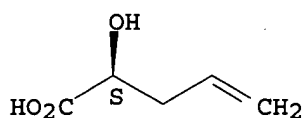
Absolute stereochemistry.



RN 164453-92-3 HCAPLUS

CN 4-Pentenoic acid, 2-hydroxy-, (2S) - (9CI) (CA INDEX NAME)

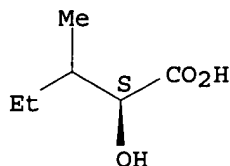
Absolute stereochemistry. Rotation (+).



RN 204119-59-5 HCAPLUS

CN Pentanoic acid, 2-hydroxy-3-methyl-, (2S) - (9CI) (CA INDEX NAME)

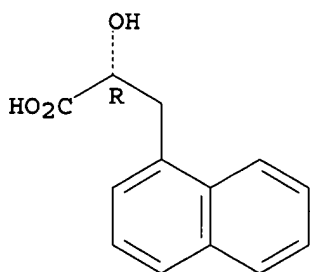
Absolute stereochemistry.



RN 285980-15-6 HCAPLUS

CN 1-Naphthalenepropanoic acid, α -hydroxy-, (α R) - (9CI) (CA INDEX NAME)

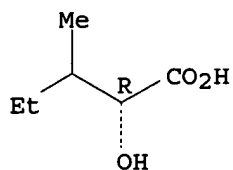
Absolute stereochemistry.



RN 387398-74-5 HCAPLUS

CN Pentanoic acid, 2-hydroxy-3-methyl-, (2R) - (9CI) (CA INDEX NAME)

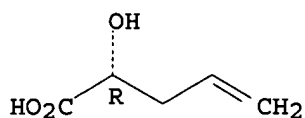
Absolute stereochemistry.



RN 413622-10-3 HCAPLUS

CN 4-Pentenoic acid, 2-hydroxy-, (2R)- (9CI) (CA INDEX NAME)

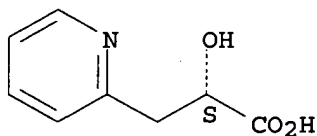
Absolute stereochemistry.



RN 413622-11-4 HCAPLUS

CN 2-Pyridinepropanoic acid, α -hydroxy-, (α S)- (9CI) (CA INDEX NAME)

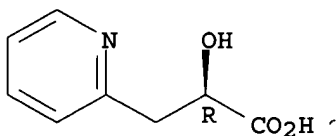
Absolute stereochemistry. Rotation (-).



RN 413622-12-5 HCAPLUS

CN 2-Pyridinepropanoic acid, α -hydroxy-, (α R)- (9CI) (CA INDEX NAME)

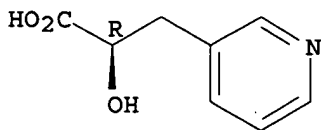
Absolute stereochemistry.



RN 413622-13-6 HCAPLUS

CN 3-Pyridinepropanoic acid, α -hydroxy-, (α R)- (9CI) (CA INDEX NAME)

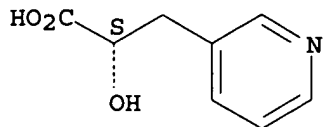
Absolute stereochemistry.



RN 413622-14-7 HCAPLUS

CN 3-Pyridinepropanoic acid, α -hydroxy-, (α S) - (9CI) (CA INDEX NAME)

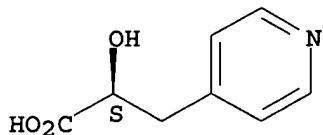
Absolute stereochemistry. Rotation (-).



RN 413622-15-8 HCAPLUS

CN 4-Pyridinepropanoic acid, α -hydroxy-, (α S) - (9CI) (CA INDEX NAME)

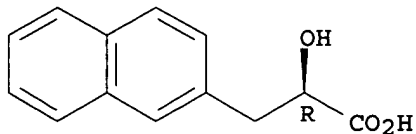
Absolute stereochemistry.



RN 413622-16-9 HCAPLUS

CN 2-Naphthalenepropanoic acid, α -hydroxy-, (α R) - (9CI) (CA INDEX NAME)

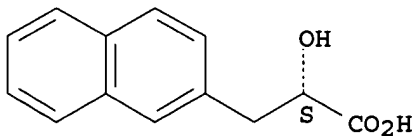
Absolute stereochemistry.



RN 413622-17-0 HCAPLUS

CN 2-Naphthalenepropanoic acid, α -hydroxy-, (α S) - (9CI) (CA INDEX NAME)

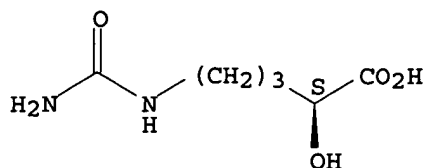
Absolute stereochemistry.



RN 413622-19-2 HCAPLUS

CN Pentanoic acid, 5-[(aminocarbonyl)amino]-2-hydroxy-, (2S) - (9CI) (CA INDEX NAME)

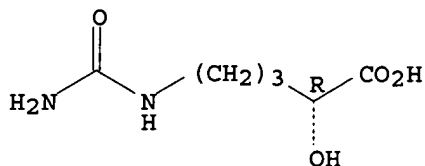
Absolute stereochemistry.



RN 413622-20-5 HCAPLUS

CN Pentanoic acid, 5-[(aminocarbonyl)amino]-2-hydroxy-, (2R)- (9CI) (CA INDEX NAME)

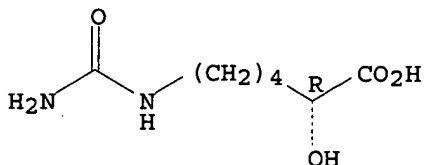
Absolute stereochemistry.



RN 413622-21-6 HCAPLUS

CN Hexanoic acid, 6-[(aminocarbonyl)amino]-2-hydroxy-, (2R)- (9CI) (CA INDEX NAME)

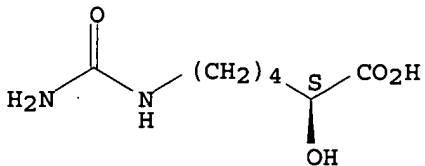
Absolute stereochemistry.



RN 413622-22-7 HCAPLUS

CN Hexanoic acid, 6-[(aminocarbonyl)amino]-2-hydroxy-, (2S)- (9CI) (CA INDEX NAME)

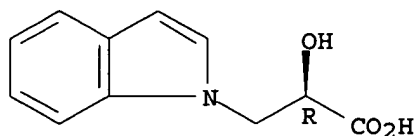
Absolute stereochemistry.



RN 413622-23-8 HCAPLUS

CN 1H-Indole-1-propanoic acid, α-hydroxy-, (αR)- (9CI) (CA INDEX NAME)

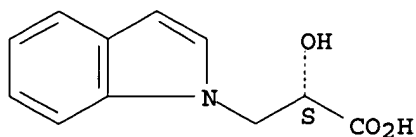
Absolute stereochemistry.



RN 413622-24-9 HCAPLUS

CN 1H-Indole-1-propanoic acid, α -hydroxy-, (α S) - (9CI) (CA INDEX NAME)

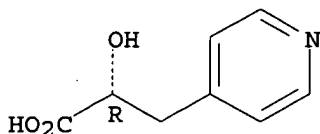
Absolute stereochemistry.



RN 413627-03-9 HCAPLUS

CN 4-Pyridinepropanoic acid, α -hydroxy-, (α R) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



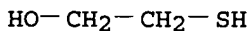
IT 60-24-2, Mercaptoethanol 3483-12-3, Dithiothreitol

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(production of α -hydroxy-carboxylic acids using coupled enzyme system)

RN 60-24-2 HCAPLUS

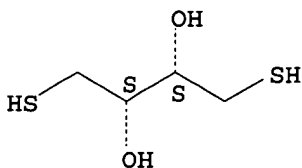
CN Ethanol, 2-mercapto- (8CI, 9CI) (CA INDEX NAME)



RN 3483-12-3 HCAPLUS

CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



IT 415177-49-0, 1: PN: WO0233110 SEQID: 82 unclaimed DNA

415177-50-3, 2: PN: WO0233110 SEQID: 83 unclaimed DNA

RL: PRP (Properties)

(unclaimed nucleotide sequence; production of α -hydroxy-carboxylic acids using a coupled enzyme system)

RN 415177-49-0 HCAPLUS

CN 1: PN: WO0233110 SEQID: 82 unclaimed DNA (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 415177-50-3 HCAPLUS

CN 2: PN: WO0233110 SEQID: 83 unclaimed DNA (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L45 ANSWER 8 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:185378 HCAPLUS

DOCUMENT NUMBER: 136:212896

TITLE: Gene markers useful for detecting skin damage in response to ultraviolet radiation

INVENTOR(S): Blumenberg, Miroslav

PATENT ASSIGNEE(S): New York University School of Medicine, USA

SOURCE: PCT Int. Appl., 274 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002020849	A2	20020314	WO 2001-US28214	20010907
WO 2002020849	A3	20030703		
W: AU, CA, JP, SG				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
AU 2001090699	A5	20020322	AU 2001-90699	20010907
EP 1390528	A2	20040225	EP 2001-970721	20010907
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2004527218	T2	20040909	JP 2002-525854	20010907
PRIORITY APPLN. INFO.:			US 2000-231061P	P 20000908
			WO 2001-US28214	W 20010907

AB The cellular response to UV radiation exposure has been characterized on the mol. level through the use of high d. gene array technol. Nucleic acid mols. and protein mols., the expression of which are repressed or induced in response to UV radiation exposure, are identified according to a temporal pattern of altered expression post UV radiation exposure. Methods are disclosed that utilized these UV radiation-regulated mols. as markers for UV radiation exposure. Other screening methods of the invention are designed for the identification of compds. that modulate the response of a cell to UV radiation exposure. The invention also provides compns. useful for drug screening or pharmaceuticals purposes.

IT 9028-86-8, Aldehyde dehydrogenase

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); BIOL (Biological study); USES (Uses)

(6; gene markers useful for detecting skin damage in response to UV radiation)

RN 9028-86-8 HCAPLUS

CN Dehydrogenase, aldehyde (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 9014-24-8
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); BIOL (Biological study); USES (Uses)
(II; gene markers useful for detecting skin damage in response to UV radiation)
RN 9014-24-8 HCAPLUS
CN Nucleotidyltransferase, ribonucleate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 196414-33-2, Disintegrin
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); BIOL (Biological study); USES (Uses)
(MCD9; gene markers useful for detecting skin damage in response to UV radiation)
RN 196414-33-2 HCAPLUS
CN Disintegrin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 321976-25-4, Sialyltransferase
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); BIOL (Biological study); USES (Uses)
(SThM; gene markers useful for detecting skin damage in response to UV radiation)
RN 321976-25-4 HCAPLUS
CN Sialyltransferase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 140879-24-9, Proteasome
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); BIOL (Biological study); USES (Uses)
(activator PA28 subunit β ; gene markers useful for detecting skin damage in response to UV radiation)
RN 140879-24-9 HCAPLUS
CN Proteinase, multicatalytic (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 9001-15-4
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); BIOL (Biological study); USES (Uses)
(b; gene markers useful for detecting skin damage in response to UV radiation)
RN 9001-15-4 HCAPLUS
CN Kinase (phosphorylating), creatine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 9001-67-6, Neuraminidase 9013-08-5, Phosphoenolpyruvate carboxykinase 9013-18-7, Acyl-coenzyme A synthetase 9014-08-8, Enolase 9014-20-4, Pyruvate dehydrogenase 9014-34-0, Stearoyl-coa desaturase 9014-46-4, Transaldolase 9023-58-9, Argininosuccinate synthetase 9023-64-7, γ -Glutamylcysteine synthetase 9023-69-2, Asparagine synthetase 9024-70-8, Uroporphyrinogen decarboxylase 9025-06-3, Cytidine deaminase 9026-04-4, Rhodanese 9026-59-9, Guanylate kinase 9027-95-6, ATP-citrate lyase 9028-12-0, Aldehyde reductase 9028-98-2, γ -Aminobutyraldehyde dehydrogenase 9029-17-8, Pyrroline 5-carboxylate reductase 9029-62-3, Squalene epoxidase 9030-21-1, Purine nucleoside phosphorylase

9030-22-2, Uridine phosphorylase 9031-71-4, Alanyl-tRNA synthetase 9035-42-1, Cytochrome c1 9035-58-9, Tissue factor (blood-coagulation) 9037-62-1, Glycyl-tRNA synthetase 9045-77-6, Fatty acid synthetase 9059-16-9, Fatty acid ω -hydroxylase 9074-14-0, Thioredoxin reductase 37237-44-8, Ceramide glucosyltransferase 42616-26-2, Methyl sterol oxidase 51901-16-7, Acylglycerol phosphate acyltransferase 61229-81-0, Methionine aminopeptidase 64885-84-3, Spermidine acetyltransferase 79747-53-8, Tyrosine phosphatase 87397-91-9, Thymosin β 10 117147-70-3, Amphiregulin 125978-95-2, Nitric oxide synthase 133249-66-8, Elafin 139691-76-2, c-Raf-1 kinase 142008-29-5, Protein kinase A 142805-58-1, Mitogen-activated Protein kinase kinase 144713-50-8, ERK3 protein kinase 154835-90-2, Adrenomedullin 157857-10-8, Prostatin 172306-54-6, Protein kinase LIMK-2 187414-15-9, Cystatin M 329900-75-6, Cyclooxygenase 2 362479-32-1, Protein phosphatase 1 362674-81-5, Protein phosphatase 2A 366806-33-9, Casein kinase II
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); BIOL (Biological study); USES (Uses)
(gene markers useful for detecting skin damage in response to UV radiation)

RN 9001-67-6 HCAPLUS

CN Neuraminidase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9013-08-5 HCAPLUS

CN Carboxykinase, phosphoenolpyruvate (guanosine triphosphate) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9013-18-7 HCAPLUS

CN Synthetase, acyl coenzyme A (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9014-08-8 HCAPLUS

CN Hydratase, phosphoenolpyruvate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9014-20-4 HCAPLUS

CN Dehydrogenase, pyruvate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9014-34-0 HCAPLUS

CN Desaturase, acyl coenzyme A (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9014-46-4 HCAPLUS

CN Transaldolase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9023-58-9 HCAPLUS

CN Synthetase, argininosuccinate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9023-64-7 HCAPLUS

CN Synthetase, γ -glutamylcysteine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9023-69-2 HCAPLUS
CN Synthetase, asparagine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9024-70-8 HCAPLUS
CN Decarboxylase, uroporphyrinogen (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9025-06-3 HCAPLUS
CN Deaminase, cytidine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9026-04-4 HCAPLUS
CN Sulfurtransferase, thiosulfate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9026-59-9 HCAPLUS
CN Kinase (phosphorylating), guanylate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9027-95-6 HCAPLUS
CN Lyase, adenosine triphosphate citrate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9028-12-0 HCAPLUS
CN Dehydrogenase, alcohol (nicotinamide adenine dinucleotide phosphate) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9028-98-2 HCAPLUS
CN Dehydrogenase, aminobutyraldehyde (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9029-17-8 HCAPLUS
CN Reductase, pyrroline-5-carboxylate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9029-62-3 HCAPLUS
CN Oxygenase, squalene mono- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9030-21-1 HCAPLUS
CN Phosphorylase, purine nucleoside (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9030-22-2 HCAPLUS
CN Phosphorylase, uridine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9031-71-4 HCAPLUS
CN Synthetase, alanyl-transfer ribonucleate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9035-42-1 HCAPLUS
CN Cytochrome c1 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9035-58-9 HCAPLUS
CN Blood-coagulation factor III (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9037-62-1 HCAPLUS

CN Synthetase, glycyl-transfer ribonucleate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9045-77-6 HCAPLUS

CN Synthetase, fatty acid (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9059-16-9 HCAPLUS

CN Oxygenase, alkane 1-mono- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9074-14-0 HCAPLUS

CN Reductase, thioredoxin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 37237-44-8 HCAPLUS

CN Glucosyltransferase, uridine diphosphoglucose-ceramide (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 42616-26-2 HCAPLUS

CN Oxidase, methylsterol (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 51901-16-7 HCAPLUS

CN Acyltransferase, 1-acylglycerol phosphate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 61229-81-0 HCAPLUS

CN Aminopeptidase, methionine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 64885-84-3 HCAPLUS

CN Acetyltransferase, spermidine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 79747-53-8 HCAPLUS

CN Phosphatase, phosphoprotein (phosphotyrosine) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 87397-91-9 HCAPLUS

CN Thymosin β 10 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 117147-70-3 HCAPLUS

CN Amphiregulin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 125978-95-2 HCAPLUS

CN Synthase, nitric oxide (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 133249-66-8 HCAPLUS

CN Proteinase inhibitor, elafin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 139691-76-2 HCAPLUS

CN Kinase (phosphorylating), gene raf-1 protein (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 142008-29-5 HCAPLUS

CN Kinase (phosphorylating), protein, A (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 142805-58-1 HCAPLUS

CN Kinase (phosphorylating), mitogen-activated protein kinase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 144713-50-8 HCAPLUS

CN Kinase (phosphorylating), protein, ERK3 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 154835-90-2 HCAPLUS

CN Adrenomedullin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 157857-10-8 HCAPLUS

CN Prostaticin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 172306-54-6 HCAPLUS

CN Kinase (phosphorylating), protein, LIMK-2 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 187414-15-9 HCAPLUS

CN Proteinase inhibitor, cystatin M (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 329900-75-6 HCAPLUS

CN Synthetase, prostaglandin endoperoxide, 2 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 362479-32-1 HCAPLUS

CN Phosphatase, protein phosphoserine/phosphothreonine, 1 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 362674-81-5 HCAPLUS

CN Phosphatase, protein phosphoserine/phosphothreonine, 2A (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 366806-33-9 HCAPLUS

CN Kinase (phosphorylating), casein, II (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 158129-99-8, GRK6 receptor kinase

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); BIOL (Biological study); USES (Uses)

(isoenzyme 6; gene markers useful for detecting skin damage in response to UV radiation)

RN 158129-99-8 HCAPLUS

CN Kinase (phosphorylating), gene GRK6 protein (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 52660-18-1, Casein kinase I

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP

(Properties); BIOL (Biological study); USES (Uses)
(isoenzyme α ; gene markers useful for detecting skin damage in
response to UV radiation)

RN 52660-18-1 HCAPLUS

CN Kinase (phosphorylating), casein, I (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 9035-37-4, Cytochrome b

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); BIOL (Biological study); USES (Uses)
(light chain; gene markers useful for detecting skin damage in response
to UV radiation)

RN 9035-37-4 HCAPLUS

CN Cytochrome b (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 135686-79-2, GenBank M60974 139803-70-6, GenBank M27396
139804-53-8, GenBank M16364 139805-23-5, GenBank X12794
139809-50-0, GenBank M58026 139848-42-3, GenBank X52979
140032-94-6, GenBank X06323 140033-06-3, GenBank L00058
140034-07-7, GenBank M54915 140034-15-7, GenBank M34182
140035-05-8, GenBank X04654 140078-74-6, GenBank X52611
140284-03-3, GenBank M13929 140284-89-5, GenBank M13829
140287-09-8, GenBank M12886 140327-31-7, GenBank X54489
140327-46-4, GenBank X53065 140509-06-4, GenBank M57731
140538-72-3, GenBank M24547 140567-13-1, GenBank M30703
140743-93-7, GenBank X06956 140747-30-4, GenBank J00120
140750-96-5, GenBank J03161 145405-51-2, GenBank M91083
145885-47-8, GenBank L08069 146068-56-6, GenBank L09229
148448-81-1, GenBank L13391 149318-04-7, GenBank X57985
150326-43-5, GenBank L19267 150574-93-9, GenBank L16862
151431-95-7, GenBank X74874 152347-85-8, GenBank L19314
152651-13-3, GenBank Z29505 153517-84-1, GenBank X77794
156553-01-4, GenBank D28235 156652-81-2, GenBank U07664
156797-75-0, GenBank X78992 158086-18-1, GenBank X77366
158159-22-9, GenBank U09937 158278-53-6, GenBank D13705
160475-72-9, GenBank L38490 164952-58-3, GenBank U20734
166836-11-9, GenBank U26727 166852-06-8, GenBank X87679
167712-81-4, GenBank U28386 168658-56-8, GenBank Z49989
170319-39-8, GenBank X90858 170673-66-2, GenBank L48546
172185-42-1, GenBank U42031 173661-84-2, GenBank U30999
173891-44-6, GenBank D42123 174053-19-1, GenBank U09578
174518-29-7, GenBank U41766 175524-88-6, GenBank S81914
177966-18-6, GenBank X92720 179725-25-8, GenBank U53347
180448-36-6, GenBank D87071 181726-44-3, GenBank U69126
182179-65-3, GenBank D64142 184673-20-9, GenBank D85527
184974-96-7, GenBank D86988 185634-65-5, GenBank D85429
186363-70-2, GenBank U89336 186681-64-1, GenBank X78687
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 , GenBank U33821

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
 (Properties); BIOL (Biological study); USES (Uses)
 (nucleotide sequence; gene markers useful for detecting skin damage in
 response to UV radiation)

RN 135686-79-2 HCAPLUS

CN DNA (human K562 cell gene gadd45 protein GADD45 cDNA plus flanks) (9CI)
 (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 139803-70-6 HCAPLUS

CN DNA (human clone pH[57,60,131] gene ASNS asparagine synthetase cDNA plus
 flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 139804-53-8 HCAPLUS

CN DNA (human creatine kinase subunit B cDNA plus flanks) (9CI) (CA INDEX
 NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 139805-23-5 HCAPLUS

CN DNA (human gene ear-2 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 139809-50-0 HCAPLUS

CN DNA (human protein NB-1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 139848-42-3 HCAPLUS

CN DNA (human small nuclear ribonucleoprotein SmB cDNA plus flanks) (9CI)
 (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140032-94-6 HCAPLUS

CN DNA (human PLC/PRF/5 cell clone pGT1 ribosomal protein L3 cDNA plus
 flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140033-06-3 HCAPLUS

CN DNA (human gene c-myc exon 3 plus 3'-flank) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140034-07-7 HCAPLUS

CN DNA (human K562 cell gene pim-1 protein cDNA plus flanks) (9CI) (CA INDEX
 NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140034-15-7 HCAPLUS

CN DNA (human testis protein kinase A γ -subunit cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140035-05-8 HCAPLUS

CN DNA (human RNA U1-associated 70,000-molecular-weight protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140078-74-6 HCAPLUS

CN DNA (human HeLa cell transcription factor AP-2 (activator protein 2) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140284-03-3 HCAPLUS

CN DNA (human HL60 cell clone HLmyc2.5. transcription factor c-myc fragment-specifying cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140284-89-5 HCAPLUS

CN DNA (human clone pHB2 raf-related protein fragment-specifying cDNA) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140287-09-8 HCAPLUS

CN DNA (human TCR $\alpha\beta$ (receptor) subunit β cDNA plus flanks)
(9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140327-31-7 HCAPLUS

CN DNA (human gene MGSA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140327-46-4 HCAPLUS

CN DNA (human small proline-rich protein gene exon 2 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140509-06-4 HCAPLUS

CN DNA (human clone NI-101 macrophage inflammatory protein 2 α cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140538-72-3 HCAPLUS

CN DNA (human amyloid precursor protein isoform 2 cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140567-13-1 HCAPLUS

CN DNA (human MCF-7 cell clone λ -ARH(6,12) amphiregulin gene exon 6)
(9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140743-93-7 HCAPLUS

CN DNA (human clone HALPHA44 tubulin isoform 44 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140747-30-4 HCAPLUS
CN DNA (human clone pUC9-myc transcription factor c-myc isform 3 cDNA plus
flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 140750-96-5 HCAPLUS
CN DNA (human transcription factor SRF (serum response factor) cDNA plus
flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 145405-51-2 HCAPLUS
CN DNA, (human gene HRC1 DNA-binding protein cDNA plus flanks) (9CI) (CA
INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 145885-47-8 HCAPLUS
CN DNA, (human clone KAB gene DnaJ DNA formation factor cDNA plus flanks)
(9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 146068-56-6 HCAPLUS
CN DNA (human gene FACL1 acyl coenzyme A synthetase cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 148448-81-1 HCAPLUS
CN DNA (human gene GOS8 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 149318-04-7 HCAPLUS
CN DNA (human clone λ HHG5E histone H 2B.1 gene plus flanks) (9CI) (CA
INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 150326-43-5 HCAPLUS
CN DNA (human protein 59 C-terminal fragment-specifying plus 3'-flank) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 150574-93-9 HCAPLUS
CN DNA, (human clone pGRK6-hh2 protein G-coupled receptor kinase isoenzyme 6
cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 151431-95-7 HCAPLUS
CN DNA (human gene RpIILS exon 1 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 152347-85-8 HCAPLUS
CN DNA (human gene HRY plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 152651-13-3 HCAPLUS
CN DNA (human clone sub2.3 nucleic acid-binding protein cDNA plus flanks)
(9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 153517-84-1 HCAPLUS
CN DNA (human WI-38 cell gene CYCG1 cyclin G1 N-terminal fragment-specifying

plus 5'-flank) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 156553-01-4 HCAPLUS

CN DNA (human gene PTGS2 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 156652-81-2 HCAPLUS

CN DNA (human gene HB9 exon 2 plus exon 3 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 156797-75-0 HCAPLUS

CN DNA (human gene ERF-2 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 158086-18-1 HCAPLUS

CN DNA (human clone pZCEA20 gene TCF11 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 158159-22-9 HCAPLUS

CN DNA (human urokinase-type plasminogen activator receptor gene exon 7) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 158278-53-6 HCAPLUS

CN DNA (human clone HK-7 alkane 1-monooxygenase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 160475-72-9 HCAPLUS

CN DNA (human gene ARF4L ADP-ribosidation protein ARF cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 164952-58-3 HCAPLUS

CN DNA (human placenta gene junB plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 166836-11-9 HCAPLUS

CN DNA (human RPMI 8226 cell clone 13 cyclin dependent kinase inhibitor p16INK4 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 166852-06-8 HCAPLUS

CN DNA (human clone 940459 histocompatibility antigen, class I E cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 167712-81-4 HCAPLUS

CN DNA (human nuclear localization sequence-binding receptor SRP1 α cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 168658-56-8 HCAPLUS

CN DNA (human clone pcDNA3-SMO smoothelin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 170319-39-8 HCAPLUS

CN DNA (human HCT 116 cell uridine phosphorylase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 170673-66-2 HCAPLUS

CN DNA (human clone 52G18 gene TSC2 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 172185-42-1 HCAPLUS

CN DNA (human progesterone receptor-associated protein FKBP54 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 173661-84-2 HCAPLUS

CN DNA (human clone memd EST (expressed sequence tag)) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 173891-44-6 HCAPLUS

CN DNA (human clone HC-1/HC-2/HC-3 cysteine-rich protein CRP cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 174053-19-1 HCAPLUS

CN DNA (human clone 3pK mitogen-activated protein kinase-activated protein kinase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 174518-29-7 HCAPLUS

CN DNA (human disintegrin MDC9 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 175524-88-6 HCAPLUS

CN DNA (human SCC-35 cell gene IEX-1 glycoprotein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 177966-18-6 HCAPLUS

CN DNA (human clone Fr3 mitochondria-associated phosphoenolpyruvate (guanosine triphosphate) carboxykinase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 179725-25-8 HCAPLUS

CN DNA (human clone hATB° neutral amino acid-transporting protein B° cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 180448-36-6 HCAPLUS

CN DNA (human gene KIAA0233 cDNA fragment) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 181726-44-3 HCAPLUS

CN DNA (human muscle transcription factor FBP2 cDNA 3'-fragment plus 3'-flank) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 182179-65-3 HCAPLUS

CN DNA (human clone pACTWDA6 histone H1x cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 184673-20-9 HCAPLUS

CN DNA (human ACC-LC-170 cell protein LIMK-2 kinase isoenzyme b N-terminal fragment-specifying cDNA plus 5'-flank) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 184974-96-7 HCAPLUS

CN DNA (human gene KIAA0221 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 185634-65-5 HCAPLUS

CN DNA (human clone λ #4 gene HSPF1 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 186363-70-2 HCAPLUS

CN DNA (human clone cosmid W12A) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 186681-64-1 HCAPLUS

CN DNA (human clone G9-3 gene G9 neuraminidase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 191117-94-9 HCAPLUS

CN DNA (human gene LPAAT- β acylglycerol phosphate acyltransferase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 191452-47-8 HCAPLUS

CN DNA (human acyl coenzyme A desaturase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 252790-90-2 HCAPLUS

CN DNA (human hydrogen ion-sodium-exchanging protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 252804-69-6 HCAPLUS

CN DNA (human protein Tls/Chop cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 252813-42-6 HCAPLUS

CN DNA (human transcription factor Id1 (inhibitor of differentiation 1) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 252816-30-1 HCAPLUS

CN DNA (human fatty acid synthase cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384413-62-1 HCAPLUS

CN DNA (human blood-coagulation factor III cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384417-37-2 HCAPLUS

CN DNA (human 14-kilodalton lectin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384419-20-9 HCAPLUS
CN DNA (human U937 cell clone U14 gene rab2 guanine-binding protein cDNA plus
flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384423-54-5 HCAPLUS
CN DNA (human HL60 cell tumor necrosis factor receptor cDNA plus flanks)
(9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384425-10-9 HCAPLUS
CN DNA (human heparin-binding growth factor cDNA plus flanks) (9CI) (CA
INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384430-35-7 HCAPLUS
CN DNA (human connective tissue-derived growth factor cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384433-84-5 HCAPLUS
CN DNA (human clone G16 transcription factor NF-I (nuclear factor I) cDNA
plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384442-87-9 HCAPLUS
CN DNA (human clone hEGR1.364 transcription factor Egr-1 cDNA plus flanks)
(9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384449-06-3 HCAPLUS
CN DNA (human desmoglein 3 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384450-75-3 HCAPLUS
CN DNA (human clone pHAE[112,178,813] lipoprotein E cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384451-83-6 HCAPLUS
CN DNA (human macrophage migration inhibitory factor 8 cDNA plus flanks)
(9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384455-81-6 HCAPLUS
CN DNA (human female sterile homeotic protein sequence homolog cDNA plus
flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384465-75-2 HCAPLUS
CN DNA (human HUVEC cell filamin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384466-30-2 HCAPLUS
CN DNA (human gene GOS2 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384471-80-1 HCAPLUS
CN DNA (human γ -glutamylcysteine synthetase cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384473-92-1 HCAPLUS

CN DNA (human H3347 cell tumor-associated antigen L6 cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384492-73-3 HCAPLUS

CN DNA (human WS8 cell protein SM22 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384496-67-7 HCAPLUS

CN DNA (human clone 1 thiosulfate sulfurtransferase cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384497-75-0 HCAPLUS

CN DNA (human EK4 cell clone CL100 phosphoprotein (phosphotyrosine)
phosphatase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384501-53-5 HCAPLUS

CN DNA (human gene ALL-1 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384504-03-4 HCAPLUS

CN DNA (human keratin 13 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384506-42-7 HCAPLUS

CN DNA (human elafin gene plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384517-16-2 HCAPLUS

CN DNA (human U-937 cell protein Mcl-1 (myeloid cell leukemia sequence-1)
cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384544-57-4 HCAPLUS

CN DNA (human NTERA2 cell protein phosphoserine/phosphothreonine kinase
1γ cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384555-05-9 HCAPLUS

CN DNA (human KG-1 cell clone HA0659 protein KIAA0111 cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384556-99-4 HCAPLUS

CN DNA (human clone phAM-A adrenomedullin cDNA plus flanks) (9CI) (CA INDEX
NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384579-90-2 HCAPLUS

CN DNA (human gene raf-1 protein kinase cDNA plus flanks) (9CI) (CA INDEX
NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384593-14-0 HCAPLUS

CN DNA (human HL-60 cell brain-specific protein HHCPA78 homolog cDNA plus

flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384594-74-5 HCAPLUS

CN DNA (human cytidine deaminase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384608-55-3 HCAPLUS

CN DNA (human MV1 cell clone NMB protein NMB cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384618-92-2 HCAPLUS

CN DNA (human high-mobility group protein HMG1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384626-96-4 HCAPLUS

CN DNA (human L23-related protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384646-28-0 HCAPLUS

CN DNA (human KUT-2 cell alanyl-transfer ribonucleate synthetase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384653-03-6 HCAPLUS

CN DNA (human HT-1080 cell clone HP00269 gene MIC1 macrophage migration inhibitory factor cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384692-91-5 HCAPLUS

CN DNA (human KG-1 cell protein KIAA0211 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384976-50-5 HCAPLUS

CN DNA (human U937 cell clone pJD43 adenylate cyclase-inhibiting Gi protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 384976-74-3 HCAPLUS

CN DNA (human purine nucleoside phosphorylase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 385079-25-4 HCAPLUS

CN DNA (human clone EJ2 glycyl-transfer ribonucleate synthetase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 385100-04-9 HCAPLUS

CN DNA (human methionine aminopeptidase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 385109-44-4 HCAPLUS

CN DNA (human thioredoxin reductase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389179-81-1 HCAPLUS
CN DNA (human clone λ CALI23 aldehyde dehydrogenase isoenzyme I cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389180-24-9 HCAPLUS
CN DNA (human clone pSV-HdIII cytochrome b subunit p22 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389183-49-7 HCAPLUS
CN DNA (human protein phosphoserine/phosphothreonine phosphatase 2A subunit α gene plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389183-89-5 HCAPLUS
CN DNA (human tubulin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389184-63-8 HCAPLUS
CN DNA (human aldehyde reductase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389185-66-4 HCAPLUS
CN DNA (human tropomyosin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389189-15-5 HCAPLUS
CN DNA (human gene CYC1 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389189-16-6 HCAPLUS
CN DNA (human desmoplakin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389189-68-8 HCAPLUS
CN DNA (human ubiquinone-binding protein gene exon 4) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389191-82-6 HCAPLUS
CN DNA (human zinc finger transcription factor cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389192-55-6 HCAPLUS
CN DNA (human ADP-ribosylation factor ARF-1 gene exons 2-5) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389196-45-6 HCAPLUS
CN DNA (human CpG island-associated gene plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389200-09-3 HCAPLUS
CN DNA (human activin subunit β A gene exon 2 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389203-74-1 HCAPLUS
CN DNA (human HBP NULL cell protein 14.1 ω light chain gene exon 3

fragment plus 3'-flank) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389204-63-1 HCAPLUS

CN DNA (human clone pBlue-MT-11 protein MT-11 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389207-76-5 HCAPLUS

CN DNA (human heat shock protein Hsp70 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389212-46-8 HCAPLUS

CN DNA (human sialyltransferase isoenzyme SThM cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389278-85-7 HCAPLUS

CN DNA (human UM-SSC-22A cell clone E48cDNA antigen E48 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389316-25-0 HCAPLUS

CN DNA (human gene SSAT plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389330-22-7 HCAPLUS

CN DNA (human MS cell bone-derived growth factor cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389346-96-7 HCAPLUS

CN DNA (human cysteine-rich fibroblast growth factor receptor cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389361-87-9 HCAPLUS

CN DNA (human phosphoprotein (phosphotyrosine) phosphatase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389387-99-9 HCAPLUS

CN DNA (human adducin subunit γ cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389406-79-5 HCAPLUS

CN DNA (human gene BTG2 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391523-63-0 HCAPLUS

CN DNA (human HL60 cell transcription factor NF- κ B (nuclear factor κ B) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391523-84-5 HCAPLUS

CN DNA (human GM637 cell clone pcD67 transcription factor ATF-4 (activation transcription factor 4) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391523-85-6 HCAPLUS

CN DNA (human HL-60 cell ADP-ribosylation factor ARF-6 cDNA plus flanks)
(9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391524-91-7 HCAPLUS

CN DNA (human transcription factor p58-64c-ets-2 cDNA plus flanks) (9CI) (CA
INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391525-02-3 HCAPLUS

CN DNA (human interferon-induced protein cDNA plus flanks) (9CI) (CA INDEX
NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391525-15-8 HCAPLUS

CN DNA (human clone PSE21 keratin 19 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391525-23-8 HCAPLUS

CN DNA (human myosin alkali light chain cDNA plus flanks) (9CI) (CA INDEX
NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391525-38-5 HCAPLUS

CN DNA (human clone 174N small proline-rich protein cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391525-67-0 HCAPLUS

CN DNA (human GM637 cell protein p68 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391525-77-2 HCAPLUS

CN DNA (human clone pCOX7.22 cytochrome oxidase subunit VIIaj-L cDNA plus
flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391525-91-0 HCAPLUS

CN DNA (human interferon-inducible protein 1-8D cDNA plus flanks) (9CI) (CA
INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391526-01-5 HCAPLUS

CN DNA (human RAJI cell calreticulin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391526-06-0 HCAPLUS

CN DNA (human Jurkat cell moysin heavy chain B fragment-specifying cDNA)
(9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391526-23-1 HCAPLUS

CN DNA (human casein kinase II subunit α cDNA plus flanks) (9CI) (CA
INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391526-26-4 HCAPLUS

CN DNA (human casein kinase II subunit α cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391526-34-4 HCAPLUS

CN DNA (human transcription factor NF-IV (nuclear factor IV) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391526-40-2 HCAPLUS

CN DNA (human argininosuccinate synthetase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391526-73-1 HCAPLUS

CN DNA (human phosphoenolpyruvate hydratase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391526-91-3 HCAPLUS

CN DNA (human glucose-transporting protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391527-14-3 HCAPLUS

CN DNA (human involucrin gene exon 2 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391527-26-7 HCAPLUS

CN DNA (human low-density lipoprotein receptor gene exon 18) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391527-32-5 HCAPLUS

CN DNA (human interleukin 8 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391527-56-3 HCAPLUS

CN DNA (human gelsolin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391527-69-8 HCAPLUS

CN DNA (human retinoic acid receptor RAR- γ 1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391527-76-7 HCAPLUS

CN DNA (human ribonucleoprotein B1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391528-28-2 HCAPLUS

CN DNA (human t-complex protein 1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391528-41-9 HCAPLUS

CN DNA (human HeLa cell histone H2A.X cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391528-57-7 HCAPLUS

CN DNA (human protein MAD-3 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391528-63-5 HCAPLUS

CN DNA (human HepG2 cell pyrroline-5-carboxylate reductase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391528-88-4 HCAPLUS

CN DNA (human Hela cell transcription factor SII cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391529-20-7 HCAPLUS

CN DNA (human cytochrome oxidase subunit Vb cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391529-45-6 HCAPLUS

CN DNA (human histone H2A.Z cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391529-52-5 HCAPLUS

CN DNA (human transcription factor XBP1 (box X-binding protein 1) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391529-82-1 HCAPLUS

CN DNA (human myosin light chain cDNA Plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391529-99-0 HCAPLUS

CN DNA (human OXEN cell clone pDP1278 ribosomal protein S4 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391530-32-8 HCAPLUS

CN DNA (human HL-60 cell transcription factor ETR101 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391530-39-5 HCAPLUS

CN DNA (human interleukin 4 receptor cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391530-80-6 HCAPLUS

CN DNA (human protein PML-2 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391530-92-0 HCAPLUS

CN DNA (human growth factor receptor fragment-specifying cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391530-98-6 HCAPLUS

CN DNA (human cyclophilin isoform hCyp3 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391531-28-5 HCAPLUS

CN DNA (human CFTR (cystic fibrosis transmembrane conductance regulator) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391531-30-9 HCAPLUS

CN DNA (human metallothionein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391532-21-1 HCAPLUS

CN DNA (human tumor necrosis factor-inducible protein A20 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391532-48-2 HCAPLUS

CN DNA (human pyruvate dehydrogenase subunit β gene exons 1-10) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391532-62-0 HCAPLUS

CN DNA (human gene IL8 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391532-75-5 HCAPLUS

CN DNA (human clone 26.44 integrin $\alpha 6$ cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391533-20-3 HCAPLUS

CN DNA (human adenosine triphosphate citrate lyase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391533-76-9 HCAPLUS

CN DNA (human UD53 cell gene BTG1 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391534-60-4 HCAPLUS

CN DNA (human β -spectrin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391535-50-5 HCAPLUS

CN DNA (human protein E16 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391535-52-7 HCAPLUS

CN DNA (human MCF-7 cell protein cyclin dependent kinase inhibitor p27KIP1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391536-31-5 HCAPLUS

CN DNA (human gene PrP exon 2 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391537-48-7 HCAPLUS

CN DNA (human KATO-III cell gene MGC-24 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391538-40-2 HCAPLUS

CN DNA (human clone 1r21 protein HLH (helix-loop-helix motif)-containing protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391538-53-7 HCAPLUS

CN DNA (human clone pHCOX7b.7.1 cytochrome c oxidase subunit VIIb cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391538-92-4 HCAPLUS

CN DNA (human Nt2D1 cell Kruppel related zinc finger protein HTF10 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391539-34-7 HCAPLUS

CN DNA (human gene HM74 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391539-48-3 HCAPLUS

CN DNA (human mucin 6 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391540-35-5 HCAPLUS

CN DNA (human GC box-binding protein BTEB2 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391540-42-4 HCAPLUS

CN DNA (human clone pE6.1 electron-transporting flavoprotein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391540-45-7 HCAPLUS

CN DNA (human HBL100 cell proliferation-associated protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391540-55-9 HCAPLUS

CN DNA (human clone Deltah2 elongation factor eEF-1δ cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391540-59-3 HCAPLUS

CN DNA (human THP-1 cell protein Macmarck cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391541-15-4 HCAPLUS

CN DNA (human protein GDI (GDP dissociation inhibitor) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391541-33-6 HCAPLUS

CN DNA (human Jurkat/Swei cell protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391542-43-1 HCAPLUS

CN DNA (human histone H2A.2 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391543-70-7 HCAPLUS

CN DNA (human gene SPRR2B plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391543-79-6 HCAPLUS

CN DNA (human U118 cell ubiquitin-conjugating enzyme fragment-specifying cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391543-93-4 HCAPLUS

CN DNA (human BJAB cell protein GDI (GDP dissociation inhibitor) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391544-24-4 HCAPLUS

CN DNA (human protein ShB (Shaker, B) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391544-47-1 HCAPLUS

CN DNA (human HeLa cell protein SREBP-1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391544-83-5 HCAPLUS

CN DNA (human CaCo2 cell clone hdsq2 desmoglein 2 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391545-13-4 HCAPLUS

CN DNA (human KYN-1 cell tumor-associated nuclear protein p120 fragment-specifying cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391545-28-1 HCAPLUS

CN DNA (human Rad protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391545-54-3 HCAPLUS

CN DNA (human KG-1 cell protein KIAA0029 fragment-specifying cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391545-96-3 HCAPLUS

CN DNA (human thiol-specific antioxidant protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391546-94-4 HCAPLUS

CN DNA (human SW613-S cell clone 3 transcription factor TRAP (tryptophan RNA-binding attenuation protein) subunit β cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391547-26-5 HCAPLUS

CN DNA (human HL-60 cell transaldolase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391547-69-6 HCAPLUS
CN DNA (human Hela cell transcription factor AREB6 cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391548-22-4 HCAPLUS
CN DNA (human M426 cell clone pSK1 interferon γ receptor accessory
factor AF-1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391549-96-5 HCAPLUS
CN DNA (human clone 23B prostaglandin endoperoxide synthetase 2 cDNA plus
flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391550-50-8 HCAPLUS
CN DNA (human KG-1 cell protein KIAA0059 cDNA plus flanks) (9CI) (CA INDEX
NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391551-06-7 HCAPLUS
CN DNA (human clone subc-21 adenosine triphosphate synthase subunit 9 cDNA
plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391551-36-3 HCAPLUS
CN DNA (human chaperonin gene Tcp20 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391551-62-5 HCAPLUS
CN DNA (human chloride channel cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391553-41-6 HCAPLUS
CN DNA (human aldehyde dehydrogenase isoenzyme 6 cDNA plus flanks) (9CI) (CA
INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391554-61-3 HCAPLUS
CN DNA (human monocarboxylic acid-transporting protein 1 cDNA plus flanks)
(9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391555-09-2 HCAPLUS
CN DNA (human gene NRF2 transcription factor NRF-2 (nuclear respiratory
factor 1) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391555-45-6 HCAPLUS
CN DNA (human KG-1 cell protein KIAA9001 cDNA plus flanks) (9CI) (CA INDEX
NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391556-45-9 HCAPLUS
CN DNA (human protein OXA1Hs cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391557-07-6 HCAPLUS
CN DNA (human thymosin β 10 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391558-09-1 HCAPLUS
CN DNA (human nitric oxide synthase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391563-77-2 HCAPLUS
CN DNA (human protein kinase ERK3 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391566-15-7 HCAPLUS
CN DNA (human antigen HLA-B cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391566-25-9 HCAPLUS
CN DNA (human karyopherin β cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391571-54-3 HCAPLUS
CN DNA (human HepG2 cell clone HL1105B protein RPB5 cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391576-12-8 HCAPLUS
CN DNA (human casein kinase I isoenzyme α cDNA plus flanks) (9CI) (CA
INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391581-56-9 HCAPLUS
CN DNA (human prostasin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391588-43-5 HCAPLUS
CN DNA (human clone pov1 phosphotyrosine phosphatase 1 cDNA plus flanks)
(9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391588-52-6 HCAPLUS
CN DNA (human uncoupling protein Uc cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391588-59-3 HCAPLUS
CN DNA (human clone s153 cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391759-23-2 HCAPLUS
CN DNA (human HeLa cell tax1-binding protein TXBP151 cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT 391763-34-1, GenBank U37690 391763-46-5, GenBank D45248
391765-26-7, GenBank U34252 391765-35-8, GenBank U37519
391770-94-8, GenBank X87241 391772-68-2, GenBank D45906
391772-74-0, GenBank D79994 391774-62-2, GenBank X89750
391777-02-9, GenBank Z69043 391779-96-7, GenBank L76200
391781-96-7, GenBank U41515 391783-00-9, GenBank D38305
391783-05-4, GenBank L37127 391783-89-4, GenBank D83777
391787-70-5, GenBank U52100 391787-71-6, GenBank U52101
391788-93-5, GenBank D78129 391789-79-0, GenBank U52426
391789-88-1, GenBank D50840 391793-92-3, GenBank U62317
391794-65-3, GenBank U35048 391794-68-6, GenBank U60205

391800-69-4, GenBank X92896 391800-94-5, GenBank U62800
 391803-81-9, GenBank D86965 391803-85-3, GenBank D86974
 391813-81-3, GenBank X99920 391814-45-2, GenBank Y09022
 391815-04-6, GenBank D87442 391815-15-9, GenBank D87462
 391815-18-2, GenBank D87469 391815-56-8, GenBank L76568
 391818-97-6, GenBank D89052 391822-82-5, GenBank U72066
 391822-85-8, GenBank D89667 391826-94-1, GenBank D87438
 391831-38-2, GenBank D50683 391834-63-2, GenBank Y08915
 391838-71-4, GenBank U65579 391840-64-5, GenBank U70660
 391840-92-9, GenBank U88629 391840-94-1, GenBank U90716
 391842-52-7, GenBank U83115 391844-50-1, GenBank U90546
 391848-57-0, GenBank U53830 391854-99-2, GenBank
 AF001294 392013-12-6, GenBank AF006084 392193-18-9,
 GenBank X56681 392193-44-1, GenBank M83667 392193-49-6
 , GenBank X53800 392204-45-4, GenBank M63573 392214-52-7
 , GenBank M20030 398095-28-8, GenBank X51345

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
 (Properties); BIOL (Biological study); USES (Uses)
 (nucleotide sequence; gene markers useful for detecting skin damage in
 response to UV radiation)

RN 391763-34-1 HCAPLUS

CN DNA (human ribonucleate nucleotidyltransferase isoenzyme II subunit RPB10
 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391763-46-5 HCAPLUS

CN DNA (human HepG2 cell multicatalytic proteinase-activating protein PA28
 subunit β cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391765-26-7 HCAPLUS

CN DNA (human aminobutyraldehyde dehydrogenase cDNA plus flanks) (9CI) (CA
 INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391765-35-8 HCAPLUS

CN DNA (human aldehyde dehydrogenase isoenzyme ALDH8 cDNA plus flanks) (9CI)
 (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391770-94-8 HCAPLUS

CN DNA (human CEM cell protein hfat cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391772-68-2 HCAPLUS

CN DNA (human gene link2 protein kinase cDNA plus flanks) (9CI) (CA INDEX
 NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391772-74-0 HCAPLUS

CN DNA (human KG-1 cell protein KIAA0172 fragment-specifying cDNA) (9CI) (CA
 INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391774-62-2 HCAPLUS

CN DNA (human protein TGIF cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391777-02-9 HCAPLUS

CN DNA (human clone I.M.A.A.G.E. Consortium ID 114340 cDNA) (9CI) (CA INDEX

NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391779-96-7 HCAPLUS

CN DNA (human guanylate kinase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391781-96-7 HCAPLUS

CN DNA (human gene DSS1 protein cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391783-00-9 HCAPLUS

CN DNA (human MDA-MB-453 cell clone tob1 protein Tob1 cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391783-05-4 HCAPLUS

CN DNA (human HT29 cell clone mf.18 ribonucleate nucleotidyltransferase
isoenzyme II cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391783-89-4 HCAPLUS

CN DNA (human KG-1 cell protein KIAA0193 cDNA plus flanks) (9CI) (CA INDEX
NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391787-70-5 HCAPLUS

CN DNA (human protein XMP cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391787-71-6 HCAPLUS

CN DNA (human protein YMP cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391788-93-5 HCAPLUS

CN DNA (human clone 39H11 squalene monooxygenase cDNA plus flanks) (9CI) (CA
INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391789-79-0 HCAPLUS

CN DNA (human protein GOK cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391789-88-1 HCAPLUS

CN DNA (human SK-Mel-28 cell ceramide glucosyltransferase cDNA plus flanks)
(9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391793-92-3 HCAPLUS

CN DNA (human clone CIT987SK-384D8 fragment) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391794-65-3 HCAPLUS

CN DNA (human protein TSC-22 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391794-68-6 HCAPLUS

CN DNA (human methylsterol oxidase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391800-69-4 HCAPLUS
CN DNA (human protein ITBA2 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391800-94-5 HCAPLUS
CN DNA (human 21PT cell cystatin M cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391803-81-9 HCAPLUS
CN DNA (human KG-1 cell protein KIAA0210 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391803-85-3 HCAPLUS
CN DNA (human KG-1 cell clone HA4626 protein KIAA0220 fragment-specifying cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391813-81-3 HCAPLUS
CN DNA (human protein S-100 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391814-45-2 HCAPLUS
CN DNA (human clone KH21 Not56-like protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391815-04-6 HCAPLUS
CN DNA (human KG-1 cell clone HA7036 protein KIAA0253 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391815-15-9 HCAPLUS
CN DNA (human clone HA6802 protein KIAA0272 fragment-specifying cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391815-18-2 HCAPLUS
CN DNA (human clone HA6133 protein KIAA0279 fragment-specifying cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391815-56-8 HCAPLUS
CN DNA (human gene ERCC4 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391818-97-6 HCAPLUS
CN DNA (human clone HATPL-8 proton-ATPase-like protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391822-82-5 HCAPLUS
CN DNA (human HeLa cell CtBP interacting protein CtIP cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391822-85-8 HCAPLUS
CN DNA (human clone MM-1 transcription factor c-myc-binding protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391826-94-1 HCAPLUS

CN DNA (human KG-1 cell clone HA7028 protein KIAA0251 fragment-specifying cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391831-38-2 HCAPLUS

CN DNA (human clone HTR2-3 β -transforming growth factor receptor type II subunit α cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391834-63-2 HCAPLUS

CN DNA (human IM9 cell protein $\alpha 4$ cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391838-71-4 HCAPLUS

CN DNA (human clone H27530 EST (expressed sequence tag)) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391840-64-5 HCAPLUS

CN DNA (human copper-transporting protein HAH1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391840-92-9 HCAPLUS

CN DNA (human elongation factor ELL2 gene) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391840-94-1 HCAPLUS

CN DNA (human HeLa cell surface protein HCAR cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391842-52-7 HCAPLUS

CN DNA (human γ -crystallin-like protein AIM1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391844-50-1 HCAPLUS

CN DNA (human butyrophilin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391848-57-0 HCAPLUS

CN DNA (human interferon-regulatory protein 7A cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391854-99-2 HCAPLUS

CN DNA (human protein IPL cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 392013-12-6 HCAPLUS

CN DNA (human gene ARC41 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 392193-18-9 HCAPLUS

CN DNA (human transcription factor junD cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 392193-44-1 HCAPLUS

CN DNA (human transcription factor NF-IL6 (nuclear factor interleukin 6) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 392193-49-6 HCAPLUS

CN DNA (human U937 cell macrophage inflammatory protein 2 β cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 392204-45-4 HCAPLUS

CN DNA (human cyclophilin-like protein SCYLP cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 392214-52-7 HCAPLUS

CN DNA (human clone 930 small proline-rich protein sprII cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 398095-28-8 HCAPLUS

CN DNA (human KG-1 cell transcription factor junB cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 37205-63-3, ATP synthase

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); BIOL (Biological study); USES (Uses)
(subunit 9; gene markers useful for detecting skin damage in response to UV radiation)

RN 37205-63-3 HCAPLUS

CN Synthase, adenosine triphosphate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 9001-16-5, Cytochrome oxidase

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); BIOL (Biological study); USES (Uses)
(subunit VIIa-L; gene markers useful for detecting skin damage in response to UV radiation)

RN 9001-16-5 HCAPLUS

CN Oxidase, cytochrome (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 114949-22-3, Activin

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); BIOL (Biological study); USES (Uses)
(β B; gene markers useful for detecting skin damage in response to UV radiation)

RN 114949-22-3 HCAPLUS

CN Activin (protein) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L45 ANSWER 9 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:185375 HCAPLUS

DOCUMENT NUMBER: 136:212895

TITLE: Screening methods to identify compounds that modulate a gene expression response of a cell to ultraviolet

INVENTOR(S): **radiation exposure**
 Blumenberg, Miroslav
 PATENT ASSIGNEE(S): New York University, USA
 SOURCE: PCT Int. Appl., 459 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002020846	A2	20020314	WO 2001-US28040	20010907
WO 2002020846	A3	20030925		
W: AU, CA, JP, SG				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 2002090624	A1	20020711	US 2001-947870	20010906
US 6794137	B2	20040921		
AU 2001090658	A5	20020322	AU 2001-90658	20010907
EP 1364051	A2	20031126	EP 2001-970677	20010907
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2004526410	T2	20040902	JP 2002-525851	20010907
US 2004185485	A1	20040923	US 2004-775875	20040210
PRIORITY APPLN. INFO.:				
			US 2000-231454P	P 20000908
			US 2001-947870	A3 20010906
			WO 2001-US28040	W 20010907

AB The cellular response to UV **radiation exposure** has been characterized on the mol. level through the use of high d. gene array technol. Nucleic acid mols. and protein mols., the expression of which are repressed or induced in response to UV **radiation exposure**, are identified according to a temporal pattern of altered expression post UV **radiation exposure**. Gene and protein sequences regulated by exposure to UV-B or UV-A radiation in cultures of epidermal keratinocytes from human foreskin are provided. Methods are disclosed that utilized these UV radiation-regulated mols. as markers for UV **radiation exposure**. Other screening methods of the invention are designed for the identification of compds. that modulate the response of a cell to UV **radiation exposure**. The invention also provides compns. useful for drug screening or pharmaceutical purposes.

IT **9028-86-8**, Aldehyde dehydrogenase
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (6; screening methods to identify compds. that modulate a gene expression response of a cell to UV **radiation exposure**)

RN 9028-86-8 HCAPLUS

CN Dehydrogenase, aldehyde (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **9014-24-8**

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (II; screening methods to identify compds. that modulate a gene expression response of a cell to UV **radiation exposure**)

RN 9014-24-8 HCAPLUS

CN Nucleotidyltransferase, ribonucleate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 196414-33-2, Disintegrin
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(MCD9; screening methods to identify compds. that modulate a gene expression response of a cell to UV radiation exposure)
RN 196414-33-2 HCAPLUS
CN Disintegrin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 321976-25-4, Sialyltransferase
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(SThM; screening methods to identify compds. that modulate a gene expression response of a cell to UV radiation exposure)
RN 321976-25-4 HCAPLUS
CN Sialyltransferase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 140879-24-9, Proteasome
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(activator PA28 subunit β ; screening methods to identify compds. that modulate a gene expression response of a cell to UV radiation exposure)
RN 140879-24-9 HCAPLUS
CN Proteinase, multicatalytic (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 9001-15-4
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(b; screening methods to identify compds. that modulate a gene expression response of a cell to UV radiation exposure)
RN 9001-15-4 HCAPLUS
CN Kinase (phosphorylating), creatine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 158129-99-8, GRK6 receptor kinase
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(isoenzyme 6; screening methods to identify compds. that modulate a gene expression response of a cell to UV radiation exposure)
RN 158129-99-8 HCAPLUS
CN Kinase (phosphorylating), gene GRK6 protein (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 52660-18-1, Casein kinase I
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(isoenzyme α ; screening methods to identify compds. that modulate a gene expression response of a cell to UV radiation exposure)
RN 52660-18-1 HCAPLUS
CN Kinase (phosphorylating), casein, I (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 9035-37-4, Cytochrome b
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (light chain; screening methods to identify compds. that modulate a gene expression response of a cell to UV radiation exposure)
 RN 9035-37-4 HCAPLUS
 CN Cytochrome b (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 135686-79-2, GenBank M60974 139803-70-6, GenBank M27396
 139804-53-8, GenBank M16364 139805-23-5, GenBank X12794
 139809-50-0, GenBank M58026 139848-42-3, GenBank X52979
 140032-94-6, GenBank X06323 140033-06-3, GenBank L00058
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 140743-93-7, GenBank X06956 140747-30-4, GenBank J00120
 140750-96-5, GenBank J03161 144755-01-1, GenBank L05717
 145405-51-2, GenBank M91083 145885-47-8, GenBank L08069
 146068-56-6, GenBank L09229 148448-81-1, GenBank L13391
 149318-04-7, GenBank X57985 150326-43-5, GenBank L19267
 150574-93-9, GenBank L16862 151431-95-7, GenBank X74874
 152347-85-8, GenBank L19314 152651-13-3, GenBank Z29505
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 , GenBank M76482 384450-75-3, GenBank M12529 384451-83-6
 , GenBank M21005 384455-81-6, GenBank X62083 384465-75-2
 , GenBank X53416 384466-30-2, GenBank M72885 384471-80-1
 , GenBank M90656 384473-92-1, GenBank M90657 384492-73-3
 , GenBank M95787 384496-67-7, GenBank X59434 384497-75-0
 , GenBank X68277 384501-53-5, GenBank L04731 384504-03-4
 , GenBank X52426 384506-42-7, GenBank L10343 384517-16-2

, GenBank L08246 384544-57-4, GenBank X74008 384555-05-9
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, GenBank U01337 384593-14-0, GenBank S73591 384594-74-5
, GenBank L27943 384608-55-3, GenBank X76534 384618-92-2
, GenBank U28749 384626-96-4, GenBank Z49254 384646-28-0
, GenBank D32050 384653-03-6, GenBank AB000584
384681-35-0, GenBank X89267 384692-91-5, GenBank D86966
384976-50-5, GenBank X04828 384976-74-3, GenBank K02574
385079-25-4, GenBank U09587 385100-04-9, GenBank U29607
385109-44-4, GenBank X91247 389179-81-1, GenBank X05409
389180-24-9, GenBank M21186 389183-49-7, GenBank M60483
389183-89-5, GenBank V00599 389184-63-8, GenBank J04794
389185-66-4, GenBank M12125 389189-15-5, GenBank J04444
389189-16-6, GenBank J05211 389189-68-8, GenBank M26730
389191-82-6, GenBank M92843 389192-55-6, GenBank M84332
389196-45-6, GenBank S78771 389200-09-3, GenBank X57579
389203-74-1, GenBank M34516 389204-63-1, GenBank X76717
389207-76-5, GenBank L26336 389212-46-8, GenBank U14550
389278-85-7, GenBank X82693 389316-25-0, GenBank U40369
389330-22-7, GenBank L42379 389346-96-7, GenBank U28811
389361-87-9, GenBank L77886 389387-99-9, GenBank U37122
389406-79-5, GenBank U72649 391523-63-0, GenBank M58603
391523-84-5, GenBank D90209 391523-85-6, GenBank M57763
391524-91-7, GenBank J04102 391525-02-3, GenBank M13755
391525-15-8, GenBank Y00503 391525-23-8, GenBank M22918
391525-38-5, GenBank M21302 391525-67-0, GenBank X15729
391525-77-2, GenBank X15822 391525-91-0, GenBank X57351
391526-01-5, GenBank M84739 391526-06-0, GenBank M69181
391526-23-1, GenBank M55268 391526-26-4, GenBank M55265
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391528-88-4, GenBank M81601 391529-20-7, GenBank M19961
391529-45-6, GenBank M37583 391529-52-5, GenBank M31627
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391530-32-8, GenBank M62831 391530-39-5, GenBank X52425
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391530-98-6, GenBank M80254 391531-28-5, GenBank M26311
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391532-48-2, GenBank D90086 391532-62-0, GenBank M28130
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391558-09-1, GenBank U17327 391563-77-2, GenBank X80692
391566-15-7, GenBank D49824 391566-25-9, GenBank L38951
391571-54-3, GenBank D38251 391576-12-8, GenBank L37042
391581-56-9, GenBank L41351 391588-43-5, GenBank U14603

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(nucleotide sequence; screening methods to identify compds. that modulate a gene expression response of a cell to UV radiation exposure)

RN 135686-79-2 HCAPLUS

CN DNA (human K562 cell gene gadd45 protein GADD45 cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 139803-70-6 HCAPLUS

CN DNA (human clone pH[57,60,131] gene ASNS asparagine synthetase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 139804-53-8 HCAPLUS

CN DNA (human creatine kinase subunit B cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 139805-23-5 HCAPLUS

CN DNA (human gene ear-2 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 139809-50-0 HCAPLUS

CN DNA (human protein NB-1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 139848-42-3 HCAPLUS

CN DNA (human small nuclear ribonucleoprotein SmB cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140032-94-6 HCAPLUS

CN DNA (human PLC/PRF/5 cell clone pGT1 ribosomal protein L3 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140033-06-3 HCAPLUS

CN DNA (human gene c-myc exon 3 plus 3'-flank) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140034-07-7 HCAPLUS

CN DNA (human K562 cell gene pim-1 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140034-15-7 HCAPLUS

CN DNA (human testis protein kinase A γ -subunit cDNA plus flanks) (9CI)

(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140035-05-8 HCAPLUS

CN DNA (human RNA U1-associated 70,000-molecular-weight protein cDNA plus
flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140078-74-6 HCAPLUS

CN DNA (human HeLa cell transcription factor AP-2 (activator protein 2) cDNA
plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140284-03-3 HCAPLUS

CN DNA (human HL60 cell clone HLmyc2.5. transcription factor c-myc
fragment-specifying cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140284-89-5 HCAPLUS

CN DNA (human clone pHB2 raf-related protein fragment-specifying cDNA) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140287-09-8 HCAPLUS

CN DNA (human TCR $\alpha\beta$ (receptor) subunit β cDNA plus flanks)
(9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140327-31-7 HCAPLUS

CN DNA (human gene MGSA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140327-46-4 HCAPLUS

CN DNA (human small proline-rich protein gene exon 2 plus flanks) (9CI) (CA
INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140509-06-4 HCAPLUS

CN DNA (human clone NI-101 macrophage inflammatory protein 2 α cDNA plus
flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140538-72-3 HCAPLUS

CN DNA (human amyloid precursor protein isoform 2 cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140567-13-1 HCAPLUS

CN DNA (human MCF-7 cell clone λ -ARH(6,12) amphiregulin gene exon 6)
(9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140743-93-7 HCAPLUS

CN DNA (human clone HALPHA44 tubulin isoform 44 cDNA plus flanks) (9CI) (CA
INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140747-30-4 HCAPLUS

CN DNA (human clone pUC9-myc transcription factor c-myc isform 3 cDNA plus
flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 140750-96-5 HCAPLUS

CN DNA (human transcription factor SRF (serum response factor) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 144755-01-1 HCAPLUS

CN DNA (human immunodeficiency virus type 1 clone H479DC3 glycoprotein 120 V3 neutralization domain-specifying 105-nucleotide fragment) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 145405-51-2 HCAPLUS

CN DNA, (human gene HRC1 DNA-binding protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 145885-47-8 HCAPLUS

CN DNA, (human clone KAB gene DnaJ DNA formation factor cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 146068-56-6 HCAPLUS

CN DNA (human gene FAC11 acyl coenzyme A synthetase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 148448-81-1 HCAPLUS

CN DNA (human gene GOS8 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 149318-04-7 HCAPLUS

CN DNA (human clone λ HHG5E histone H 2B.1 gene plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 150326-43-5 HCAPLUS

CN DNA (human protein 59 C-terminal fragment-specifying plus 3'-flank) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 150574-93-9 HCAPLUS

CN DNA, (human clone pGRK6-hh2 protein G-coupled receptor kinase isoenzyme 6 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 151431-95-7 HCAPLUS

CN DNA (human gene RpIILS exon 1 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 152347-85-8 HCAPLUS

CN DNA (human gene HRY plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 152651-13-3 HCAPLUS

CN DNA (human clone sub2.3 nucleic acid-binding protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 153517-84-1 HCAPLUS
CN DNA (human WI-38 cell gene CYCG1 cyclin G1 N-terminal fragment-specifying plus 5'-flank) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 156553-01-4 HCAPLUS
CN DNA (human gene PTGS2 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 156652-81-2 HCAPLUS
CN DNA (human gene HB9 exon 2 plus exon 3 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 156797-75-0 HCAPLUS
CN DNA (human gene ERF-2 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 158086-18-1 HCAPLUS
CN DNA (human clone pZcEA20 gene TCF11 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 158159-22-9 HCAPLUS
CN DNA (human urokinase-type plasminogen activator receptor gene exon 7) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 158278-53-6 HCAPLUS
CN DNA (human clone HK-7 alkane 1-monooxygenase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 160475-72-9 HCAPLUS
CN DNA (human gene ARF4L ADP-ribosidation protein ARF cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 164952-58-3 HCAPLUS
CN DNA (human placenta gene junB plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 166836-11-9 HCAPLUS
CN DNA (human RPMI 8226 cell clone 13 cyclin dependent kinase inhibitor p16INK4 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 166852-06-8 HCAPLUS
CN DNA (human clone 940459 histocompatibility antigen, class I E cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 167712-81-4 HCAPLUS
CN DNA (human nuclear localization sequence-binding receptor SRP1 α cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 168658-56-8 HCAPLUS
CN DNA (human clone pcDNA3-SMO smoothelin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 170319-39-8 HCAPLUS

CN DNA (human HCT 116 cell uridine phosphorylase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 170673-66-2 HCAPLUS

CN DNA (human clone 52G18 gene TSC2 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 172185-42-1 HCAPLUS

CN DNA (human progesterone receptor-associated protein FKBP54 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 173661-84-2 HCAPLUS

CN DNA (human clone memd EST (expressed sequence tag)) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 173891-44-6 HCAPLUS

CN DNA (human clone HC-1/HC-2/HC-3 cysteine-rich protein CRP cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 174053-19-1 HCAPLUS

CN DNA (human clone 3pK mitogen-activated protein kinase-activated protein kinase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 174518-29-7 HCAPLUS

CN DNA (human disintegrin MDC9 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 175524-88-6 HCAPLUS

CN DNA (human SCC-35 cell gene IEX-1 glycoprotein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 177966-18-6 HCAPLUS

CN DNA (human clone Fr3 mitochondria-associated phosphoenolpyruvate (guanosine triphosphate) carboxykinase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 179725-25-8 HCAPLUS

CN DNA (human clone hATB^o neutral amino acid-transporting protein B^o cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 180448-36-6 HCAPLUS

CN DNA (human gene KIAA0233 cDNA fragment) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 181726-44-3 HCAPLUS

CN DNA (human muscle transcription factor FBP2 cDNA 3'-fragment plus 3'-flank) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 182179-65-3 HCAPLUS

CN DNA (human clone pACTWDA6 histone H1x cDNA plus flanks) (9CI) (CA INDEX NAME)

NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 184673-20-9 HCAPLUS

CN DNA (human ACC-LC-170 cell protein LIMK-2 kinase isoenzyme b N-terminal fragment-specifying cDNA plus 5'-flank) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 184974-96-7 HCAPLUS

CN DNA (human gene KIAA0221 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 185634-65-5 HCAPLUS

CN DNA (human clone λ #4 gene HSPF1 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 186363-70-2 HCAPLUS

CN DNA (human clone cosmid W12A) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 186681-64-1 HCAPLUS

CN DNA (human clone G9-3 gene G9 neuraminidase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 190552-38-6 HCAPLUS

CN DNA (human endogenous retrovirus ERV-H mononuclear cell 142-amino acid protein plus gene env envelope protein C-terminal fragment-specifying cDNA plus 5'-flank) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 191117-94-9 HCAPLUS

CN DNA (human gene LPAAT- β acylglycerol phosphate acyltransferase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 191452-47-8 HCAPLUS

CN DNA (human acyl coenzyme A desaturase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 193737-05-2 HCAPLUS

CN DNA (human protein Daxx C-terminal-specifying cDNA plus 3'-flank) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 252790-90-2 HCAPLUS

CN DNA (human hydrogen ion-sodium-exchanging protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 252804-69-6 HCAPLUS

CN DNA (human protein Tls/Chop cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 252813-42-6 HCAPLUS

CN DNA (human transcription factor Id1 (inhibitor of differentiation 1) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 252816-30-1 HCAPLUS
CN DNA (human fatty acid synthase cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384413-62-1 HCAPLUS
CN DNA (human blood-coagulation factor III cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384417-37-2 HCAPLUS
CN DNA (human 14-kilodalton lectin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384419-20-9 HCAPLUS
CN DNA (human U937 cell clone U14 gene rab2 guanine-binding protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384423-54-5 HCAPLUS
CN DNA (human HL60 cell tumor necrosis factor receptor cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384425-10-9 HCAPLUS
CN DNA (human heparin-binding growth factor cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384430-35-7 HCAPLUS
CN DNA (human connective tissue-derived growth factor cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384433-84-5 HCAPLUS
CN DNA (human clone G16 transcription factor NF-I (nuclear factor I) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384442-87-9 HCAPLUS
CN DNA (human clone hEGR1.364 transcription factor Egr-1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384449-06-3 HCAPLUS
CN DNA (human desmoglein 3 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384450-75-3 HCAPLUS
CN DNA (human clone pHAE[112,178,813] lipoprotein E cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384451-83-6 HCAPLUS
CN DNA (human macrophage migration inhibitory factor 8 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384455-81-6 HCAPLUS
CN DNA (human female sterile homeotic protein sequence homolog cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384465-75-2 HCAPLUS
CN DNA (human HUVEC cell filamin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384466-30-2 HCAPLUS
CN DNA (human gene GOS2 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384471-80-1 HCAPLUS
CN DNA (human γ -glutamylcysteine synthetase cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384473-92-1 HCAPLUS
CN DNA (human H3347 cell tumor-associated antigen L6 cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384492-73-3 HCAPLUS
CN DNA (human WS8 cell protein SM22 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384496-67-7 HCAPLUS
CN DNA (human clone 1 thiosulfate sulfurtransferase cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384497-75-0 HCAPLUS
CN DNA (human EK4 cell clone CL100 phosphoprotein (phosphotyrosine)
phosphatase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384501-53-5 HCAPLUS
CN DNA (human gene ALL-1 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384504-03-4 HCAPLUS
CN DNA (human keratin 13 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384506-42-7 HCAPLUS
CN DNA (human elafin gene plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384517-16-2 HCAPLUS
CN DNA (human U-931 cell protein Mcl-1 (myeloid cell leukemia sequence-1)
cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384544-57-4 HCAPLUS
CN DNA (human NTERA2 cell protein phosphoserine/phosphothreonine kinase
1 γ cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384555-05-9 HCAPLUS
CN DNA (human KG-1 cell clone HA0659 protein KIAA0111 cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384556-99-4 HCAPLUS
CN DNA (human clone pAM-A adrenomedullin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384579-90-2 HCAPLUS
CN DNA (human gene raf-1 protein kinase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384593-14-0 HCAPLUS
CN DNA (human HL-60 cell brain-specific protein HHCPA78 homolog cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384594-74-5 HCAPLUS
CN DNA (human cytidine deaminase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384608-55-3 HCAPLUS
CN DNA (human MV1 cell clone NMB protein NMB cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384618-92-2 HCAPLUS
CN DNA (human high-mobility group protein HMG1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384626-96-4 HCAPLUS
CN DNA (human L23-related protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384646-28-0 HCAPLUS
CN DNA (human KUT-2 cell alanyl-transfer ribonucleate synthetase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384653-03-6 HCAPLUS
CN DNA (human HT-1080 cell clone HP00269 gene MIC1 macrophage migration inhibitory factor cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384681-35-0 HCAPLUS
CN DNA (human uroporphyrinogen decarboxylase gene plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384692-91-5 HCAPLUS
CN DNA (human KG-1 cell protein KIAA0211 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384976-50-5 HCAPLUS
CN DNA (human U937 cell clone pJD43 adenylate cyclase-inhibiting Gi protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 384976-74-3 HCAPLUS

CN DNA (human purine nucleoside phosphorylase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 385079-25-4 HCAPLUS

CN DNA (human clone EJ2 glycyl-transfer ribonucleate synthetase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 385100-04-9 HCAPLUS

CN DNA (human methionine aminopeptidase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 385109-44-4 HCAPLUS

CN DNA (human thioredoxin reductase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389179-81-1 HCAPLUS

CN DNA (human clone λ ALI23 aldehyde dehydrogenase isoenzyme I cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389180-24-9 HCAPLUS

CN DNA (human clone pSV-HdIII cytochrome b subunit p22 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389183-49-7 HCAPLUS

CN DNA (human protein phosphoserine/phosphothreonine phosphatase 2A subunit α gene plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389183-89-5 HCAPLUS

CN DNA (human tubulin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389184-63-8 HCAPLUS

CN DNA (human aldehyde reductase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389185-66-4 HCAPLUS

CN DNA (human tropomyosin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389189-15-5 HCAPLUS

CN DNA (human gene CYC1 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389189-16-6 HCAPLUS

CN DNA (human desmoplakin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389189-68-8 HCAPLUS

CN DNA (human ubiquinone-binding protein gene exon 4) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389191-82-6 HCAPLUS

CN DNA (human zinc finger transcription factor cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389192-55-6 HCAPLUS

CN DNA (human ADP-ribosylation factor ARF-1 gene exons 2-5) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389196-45-6 HCAPLUS

CN DNA (human CpG island-associated gene plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389200-09-3 HCAPLUS

CN DNA (human activin subunit β A gene exon 2 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389203-74-1 HCAPLUS

CN DNA (human HBP NULL cell protein 14.1 ω light chain gene exon 3 fragment plus 3'-flank) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389204-63-1 HCAPLUS

CN DNA (human clone pBlue-MT-11 protein MT-11 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389207-76-5 HCAPLUS

CN DNA (human heat shock protein Hsp70 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389212-46-8 HCAPLUS

CN DNA (human sialyltransferase isoenzyme SThM cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389278-85-7 HCAPLUS

CN DNA (human UM-SSC-22A cell clone E48cDNA antigen E48 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389316-25-0 HCAPLUS

CN DNA (human gene SSAT plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389330-22-7 HCAPLUS

CN DNA (human MS cell bone-derived growth factor cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389346-96-7 HCAPLUS

CN DNA (human cysteine-rich fibroblast growth factor receptor cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389361-87-9 HCAPLUS

CN DNA (human phosphoprotein (phosphotyrosine) phosphatase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 389387-99-9 HCAPLUS
CN DNA (human adducin subunit γ cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 389406-79-5 HCAPLUS
CN DNA (human gene BTG2 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391523-63-0 HCAPLUS
CN DNA (human HL60 cell transcription factor NF- κ B (nuclear factor κ B) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391523-84-5 HCAPLUS
CN DNA (human GM637 cell clone pcD67 transcription factor ATF-4 (activation transcription factor 4) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391523-85-6 HCAPLUS
CN DNA (human HL-60 cell ADP-ribosylation factor ARF-6 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391524-91-7 HCAPLUS
CN DNA (human transcription factor p58-64c-ets-2 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391525-02-3 HCAPLUS
CN DNA (human interferon-induced protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391525-15-8 HCAPLUS
CN DNA (human clone PSE21 keratin 19 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391525-23-8 HCAPLUS
CN DNA (human myosin alkali light chain cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391525-38-5 HCAPLUS
CN DNA (human clone 174N small proline-rich protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391525-67-0 HCAPLUS
CN DNA (human GM637 cell protein p68 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391525-77-2 HCAPLUS
CN DNA (human clone pCOX7.22 cytochrome oxidase subunit VIIaj-L cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391525-91-0 HCAPLUS
CN DNA (human interferon-inducible protein 1-8D cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391526-01-5 HCAPLUS

CN DNA (human RAJI cell calreticulin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391526-06-0 HCAPLUS

CN DNA (human Jurkat cell moysin heavy chain B fragment-specifying cDNA)
(9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391526-23-1 HCAPLUS

CN DNA (human casein kinase II subunit α cDNA plus flanks) (9CI) (CA
INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391526-26-4 HCAPLUS

CN DNA (human casein kinase II subunit α cDNA plus flanks) (9CI) (CA
INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391526-34-4 HCAPLUS

CN DNA (human transcription factor NF-IV (nuclear factor IV) cDNA plus
flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391526-40-2 HCAPLUS

CN DNA (human argininosuccinate synthetase cDNA plus flanks) (9CI) (CA INDEX
NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391526-73-1 HCAPLUS

CN DNA (human phosphoenolpyruvate hydratase cDNA plus flanks) (9CI) (CA INDEX
NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391526-91-3 HCAPLUS

CN DNA (human glucose-transporting protein cDNA plus flanks) (9CI) (CA INDEX
NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391527-14-3 HCAPLUS

CN DNA (human involucrin gene exon 2 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391527-26-7 HCAPLUS

CN DNA (human low-density lipoprotein receptor gene exon 18) (9CI) (CA INDEX
NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391527-32-5 HCAPLUS

CN DNA (human interleukin 8 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391527-56-3 HCAPLUS

CN DNA (human gelsolin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391527-69-8 HCAPLUS

CN DNA (human retinoic acid receptor RAR- γ 1 cDNA plus flanks) (9CI)

(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391527-76-7 HCAPLUS

CN DNA (human ribonucleoprotein B1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391528-28-2 HCAPLUS

CN DNA (human t-complex protein 1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391528-41-9 HCAPLUS

CN DNA (human HeLa cell histone H2A.X cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391528-57-7 HCAPLUS

CN DNA (human protein MAD-3 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391528-63-5 HCAPLUS

CN DNA (human HepG2 cell pyrroline-5-carboxylate reductase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391528-88-4 HCAPLUS

CN DNA (human Hela cell transcription factor SII cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391529-20-7 HCAPLUS

CN DNA (human cytochrome oxidase subunit Vb cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391529-45-6 HCAPLUS

CN DNA (human histone H2A.Z cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391529-52-5 HCAPLUS

CN DNA (human transcription factor XBP1 (box X-binding protein 1) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391529-82-1 HCAPLUS

CN DNA (human myosin light chain cDNA Plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391529-99-0 HCAPLUS

CN DNA (human OXEN cell clone pDP1278 ribosomal protein S4 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391530-32-8 HCAPLUS

CN DNA (human HL-60 cell transcription factor ETR101 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391530-39-5 HCAPLUS

CN DNA (human interleukin 4 receptor cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391530-80-6 HCAPLUS

CN DNA (human protein PML-2 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391530-92-0 HCAPLUS

CN DNA (human growth factor receptor fragment-specifying cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391530-98-6 HCAPLUS

CN DNA (human cyclophilin isoform hCyp3 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391531-28-5 HCAPLUS

CN DNA (human CFTR (cystic fibrosis transmembrane conductance regulator) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391531-30-9 HCAPLUS

CN DNA (human metallothionein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391532-21-1 HCAPLUS

CN DNA (human tumor necrosis factor-inducible protein A20 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391532-48-2 HCAPLUS

CN DNA (human pyruvate dehydrogenase subunit β gene exons 1-10) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391532-62-0 HCAPLUS

CN DNA (human gene IL8 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391532-75-5 HCAPLUS

CN DNA (human clone 26.44 integrin $\alpha 6$ cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391533-20-3 HCAPLUS

CN DNA (human adenosine triphosphate citrate lyase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391533-76-9 HCAPLUS

CN DNA (human UD53 cell gene BTG1 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391534-60-4 HCAPLUS

CN DNA (human β -spectrin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391535-50-5 HCAPLUS

CN DNA (human protein E16 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391535-52-7 HCAPLUS

CN DNA (human MCF-7 cell protein cyclin dependent kinase inhibitor p27KIP1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391536-31-5 HCAPLUS

CN DNA (human gene PrP exon 2 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391537-48-7 HCAPLUS

CN DNA (human KATO-III cell gene MGC-24 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391538-40-2 HCAPLUS

CN DNA (human clone 1r21 protein HLH (helix-loop-helix motif)-containing protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391538-53-7 HCAPLUS

CN DNA (human clone pHCOX7b.7.1 cytochrome c oxidase subunit VIIb cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391538-92-4 HCAPLUS

CN DNA (human Nt2D1 cell Kruppel related zinc finger protein HTF10 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391539-34-7 HCAPLUS

CN DNA (human gene HM74 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391539-48-3 HCAPLUS

CN DNA (human mucin 6 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391540-35-5 HCAPLUS

CN DNA (human GC box-binding protein BTEB2 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391540-42-4 HCAPLUS

CN DNA (human clone pE6.1 electron-transporting flavoprotein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391540-45-7 HCAPLUS

CN DNA (human HBL100 cell proliferation-associated protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391540-55-9 HCAPLUS

CN DNA (human clone Deltah2 elongation factor eEF-1δ cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391540-59-3 HCAPLUS

CN DNA (human THP-1 cell protein Macmarck cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391541-15-4 HCAPLUS

CN DNA (human protein GDI (GDP dissociation inhibitor) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391541-33-6 HCAPLUS

CN DNA (human Jurkat/Swei cell protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391542-43-1 HCAPLUS

CN DNA (human histone H2A.2 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391543-70-7 HCAPLUS

CN DNA (human gene SPRR2B plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391543-79-6 HCAPLUS

CN DNA (human U118 cell ubiquitin-conjugating enzyme fragment-specifying cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391543-93-4 HCAPLUS

CN DNA (human BJAB cell protein GDI (GDP dissociation inhibitor) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391544-24-4 HCAPLUS

CN DNA (human protein ShB (Shaker, B) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391544-47-1 HCAPLUS

CN DNA (human HeLa cell protein SREBP-1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391544-83-5 HCAPLUS

CN DNA (human CaCo2 cell clone hdsq2 desmoglein 2 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391545-13-4 HCAPLUS

CN DNA (human KYN-1 cell tumor-associated nuclear protein p120 fragment-specifying cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391545-28-1 HCAPLUS

CN DNA (human Rad protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391545-54-3 HCAPLUS

CN DNA (human KG-1 cell protein KIAA0029 fragment-specifying cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391545-96-3 HCAPLUS
CN DNA (human thiol-specific antioxidant protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391546-94-4 HCAPLUS
CN DNA (human SW613-S cell clone 3 transcription factor TRAP (tryptophan RNA-binding attenuation protein) subunit β cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391547-26-5 HCAPLUS
CN DNA (human HL-60 cell transaldolase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391547-69-6 HCAPLUS
CN DNA (human Hela cell transcription factor AREB6 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391548-22-4 HCAPLUS
CN DNA (human M426 cell clone pSK1 interferon γ receptor accessory factor AF-1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391549-96-5 HCAPLUS
CN DNA (human clone 23B prostaglandin endoperoxide synthetase 2 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391550-50-8 HCAPLUS
CN DNA (human KG-1 cell protein KIAA0059 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391551-06-7 HCAPLUS
CN DNA (human clone subc-21 adenosine triphosphate synthase subunit 9 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391551-36-3 HCAPLUS
CN DNA (human chaperonin gene Tcp20 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391551-62-5 HCAPLUS
CN DNA (human chloride channel cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391553-41-6 HCAPLUS
CN DNA (human aldehyde dehydrogenase isoenzyme 6 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 391554-61-3 HCAPLUS
CN DNA (human monocarboxylic acid-transporting protein 1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391555-09-2 HCAPLUS
CN DNA (human gene NRF2 transcription factor NRF-2 (nuclear respiratory factor 1) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391555-45-6 HCAPLUS
CN DNA (human KG-1 cell protein KIAA9001 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391556-45-9 HCAPLUS
CN DNA (human protein OXA1Hs cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391557-07-6 HCAPLUS
CN DNA (human thymosin β 10 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391558-09-1 HCAPLUS
CN DNA (human nitric oxide synthase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391563-77-2 HCAPLUS
CN DNA (human protein kinase ERK3 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391566-15-7 HCAPLUS
CN DNA (human antigen HLA-B cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391566-25-9 HCAPLUS
CN DNA (human karyopherin β cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391571-54-3 HCAPLUS
CN DNA (human HepG2 cell clone HL1105B protein RPB5 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391576-12-8 HCAPLUS
CN DNA (human casein kinase I isoenzyme α cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391581-56-9 HCAPLUS
CN DNA (human prostasin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391588-43-5 HCAPLUS
CN DNA (human clone pov1 phosphotyrosine phosphatase 1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

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391759-23-2, GenBank U33821 391763-34-1, GenBank U37690
391763-46-5, GenBank D45248 391765-26-7, GenBank U34252
391765-35-8, GenBank U37519 391770-94-8, GenBank X87241
391772-68-2, GenBank D45906 391772-74-0, GenBank D79994
391774-62-2, GenBank X89750 391777-02-9, GenBank Z69043
391779-96-7, GenBank L76200 391781-96-7, GenBank U41515

391782-08-4, GenBank X94563 391783-00-9, GenBank D38305
 391783-05-4, GenBank L37127 391783-89-4, GenBank D83777
 391787-70-5, GenBank U52100 391787-71-6, GenBank U52101
 391788-93-5, GenBank D78129 391789-79-0, GenBank U52426
 391789-88-1, GenBank D50840 391793-92-3, GenBank U62317
 391794-65-3, GenBank U35048 391794-68-6, GenBank U60205
 391800-69-4, GenBank X92896 391800-94-5, GenBank U62800
 391803-81-9, GenBank D86965 391803-85-3, GenBank D86974
 391809-06-6, GenBank U66616 391813-81-3, GenBank X99920
 391814-45-2, GenBank Y09022 391815-04-6, GenBank D87442
 391815-15-9, GenBank D87462 391815-18-2, GenBank D87469
 391815-56-8, GenBank L76568 391818-97-6, GenBank D89052
 391822-82-5, GenBank U72066 391822-85-8, GenBank D89667
 391826-94-1, GenBank D87438 391831-38-2, GenBank D50683
 391834-63-2, GenBank Y08915 391838-71-4, GenBank U65579
 391840-64-5, GenBank U70660 391840-92-9, GenBank U88629
 391840-94-1, GenBank U90716 391842-52-7, GenBank U83115
 391844-50-1, GenBank U90546 391848-57-0, GenBank U53830
 391854-99-2, GenBank AF001294 392013-12-6, GenBank
 AF006084 392193-18-9, GenBank X56681 392193-44-1,
 GenBank M83667 392193-49-6, GenBank X53800 392204-45-4
 , GenBank M63573 392214-52-7, GenBank M20030 398095-28-8
 , GenBank X51345

RL: BSU (Biological study, unclassified); BUU (Biological use,
 unclassified); BIOL (Biological study); USES (Uses)
 (nucleotide sequence; screening methods to identify compds. that
 modulate a gene expression response of a cell to UV radiation
 exposure)

RN 391588-52-6 HCAPLUS
 CN DNA (human uncoupling protein Uc cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391588-59-3 HCAPLUS
 CN DNA (human clone s153 cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391759-23-2 HCAPLUS
 CN DNA (human HeLa cell tax1-binding protein TXBP151 cDNA plus flanks) (9CI)
 (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391763-34-1 HCAPLUS
 CN DNA (human ribonucleate nucleotidyltransferase isoenzyme II subunit RPB10
 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391763-46-5 HCAPLUS
 CN DNA (human HepG2 cell multicatalytic proteinase-activating protein PA28
 subunit β cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391765-26-7 HCAPLUS
 CN DNA (human aminobutyraldehyde dehydrogenase cDNA plus flanks) (9CI) (CA
 INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391765-35-8 HCAPLUS
 CN DNA (human aldehyde dehydrogenase isoenzyme ALDH8 cDNA plus flanks) (9CI)
 (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391770-94-8 HCAPLUS

CN DNA (human CEM cell protein hfat cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391772-68-2 HCAPLUS

CN DNA (human gene link2 protein kinase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391772-74-0 HCAPLUS

CN DNA (human KG-1 cell protein KIAA0172 fragment-specifying cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391774-62-2 HCAPLUS

CN DNA (human protein TGIF cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391777-02-9 HCAPLUS

CN DNA (human clone I.M.A.A.G.E. Consortium ID 114340 cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391779-96-7 HCAPLUS

CN DNA (human guanylate kinase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391781-96-7 HCAPLUS

CN DNA (human gene DSS1 protein cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391782-08-4 HCAPLUS

CN DNA (human clone hgDBI3 gene DBI exon 1) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391783-00-9 HCAPLUS

CN DNA (human MDA-MB-453 cell clone tob1 protein Tob1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391783-05-4 HCAPLUS

CN DNA (human HT29 cell clone mf.18 ribonucleate nucleotidyltransferase isoenzyme II cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391783-89-4 HCAPLUS

CN DNA (human KG-1 cell protein KIAA0193 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391787-70-5 HCAPLUS

CN DNA (human protein XMP cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391787-71-6 HCAPLUS

CN DNA (human protein YMP cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391788-93-5 HCAPLUS

CN DNA (human clone 39H11 squalene monooxygenase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391789-79-0 HCAPLUS

CN DNA (human protein GOK cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391789-88-1 HCAPLUS

CN DNA (human SK-Mel-28 cell ceramide glucosyltransferase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391793-92-3 HCAPLUS

CN DNA (human clone CIT987SK-384D8 fragment) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391794-65-3 HCAPLUS

CN DNA (human protein TSC-22 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391794-68-6 HCAPLUS

CN DNA (human methylsterol oxidase cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391800-69-4 HCAPLUS

CN DNA (human protein ITBA2 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391800-94-5 HCAPLUS

CN DNA (human 21PT cell cystatin M cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391803-81-9 HCAPLUS

CN DNA (human KG-1 cell protein KIAA0210 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391803-85-3 HCAPLUS

CN DNA (human KG-1 cell clone HA4626 protein KIAA0220 fragment-specifying cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391809-06-6 HCAPLUS

CN DNA (human protein BAF170 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391813-81-3 HCAPLUS

CN DNA (human protein S-100 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391814-45-2 HCAPLUS

CN DNA (human clone KH21 Not56-like protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391815-04-6 HCAPLUS

CN DNA (human KG-1 cell clone HA7036 protein KIAA0253 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391815-15-9 HCAPLUS

CN DNA (human clone HA6802 protein KIAA0272 fragment-specifying cDNA) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391815-18-2 HCAPLUS

CN DNA (human clone HA6133 protein KIAA0279 fragment-specifying cDNA) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391815-56-8 HCAPLUS

CN DNA (human gene ERCC4 plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391818-97-6 HCAPLUS

CN DNA (human clone HATPL-8 proton-ATPase-like protein cDNA plus flanks)
(9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391822-82-5 HCAPLUS

CN DNA (human HeLa cell CtBP interacting protein CtIP cDNA plus flanks) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391822-85-8 HCAPLUS

CN DNA (human clone MM-1 transcription factor c-myc-binding protein cDNA plus
flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391826-94-1 HCAPLUS

CN DNA (human KG-1 cell clone HA7028 protein KIAA0251 fragment-specifying
cDNA) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391831-38-2 HCAPLUS

CN DNA (human clone HTR2-3 β -transforming growth factor receptor type II
subunit α cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391834-63-2 HCAPLUS

CN DNA (human IM9 cell protein $\alpha 4$ cDNA plus flanks) (9CI) (CA INDEX
NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391838-71-4 HCAPLUS

CN DNA (human clone H27530 EST (expressed sequence tag)) (9CI) (CA INDEX
NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391840-64-5 HCAPLUS

CN DNA (human copper-transporting protein HAH1 cDNA plus flanks) (9CI) (CA
INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391840-92-9 HCAPLUS

CN DNA (human elongation factor ELL2 gene) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391840-94-1 HCAPLUS

CN DNA (human HeLa cell surface protein HCAR cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391842-52-7 HCAPLUS

CN DNA (human γ -crystallin-like protein AIM1 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391844-50-1 HCAPLUS

CN DNA (human butyrophilin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391848-57-0 HCAPLUS

CN DNA (human interferon-regulatory protein 7A cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 391854-99-2 HCAPLUS

CN DNA (human protein IPL cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 392013-12-6 HCAPLUS

CN DNA (human gene ARC41 protein cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 392193-18-9 HCAPLUS

CN DNA (human transcription factor junD cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 392193-44-1 HCAPLUS

CN DNA (human transcription factor NF-IL6 (nuclear factor interleukin 6) cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 392193-49-6 HCAPLUS

CN DNA (human U937 cell macrophage inflammatory protein 2 β cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 392204-45-4 HCAPLUS

CN DNA (human cyclophilin-like protein SCYLP cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 392214-52-7 HCAPLUS

CN DNA (human clone 930 small proline-rich protein sprII cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 398095-28-8 HCAPLUS

CN DNA (human KG-1 cell transcription factor junB cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 9001-67-6, Neuraminidase 9013-08-5, Phosphoenolpyruvate carboxykinase 9013-18-7, Acyl-coenzyme A synthetase 9014-08-8, Enolase 9014-20-4, Pyruvate dehydrogenase 9014-34-0, Stearoyl-coa desaturase 9014-46-4,

Transaldolase 9023-58-9, Argininosuccinate synthetase 9023-64-7, γ -Glutamylcysteine synthetase 9023-69-2, Asparagine synthetase 9024-70-8, Uroporphyrinogen decarboxylase 9025-06-3, Cytidine deaminase 9026-04-4, Rhodanese 9026-59-9, Guanylate kinase 9027-95-6, ATP-citrate lyase 9028-12-0, Aldehyde reductase 9028-98-2, γ -Aminobutyraldehyde dehydrogenase 9029-17-8, Pyrroline 5-carboxylate reductase 9029-62-3, Squalene epoxidase 9030-21-1, Purine nucleoside phosphorylase 9030-22-2, Uridine phosphorylase 9031-71-4, Alanyl-tRNA synthetase 9035-42-1, Cytochrome c1 9035-58-9, Tissue factor (blood-coagulation) 9037-62-1, Glycyl-tRNA synthetase 9045-77-6, Fatty acid synthetase 9059-16-9, Fatty acid ω -hydroxylase 9074-14-0, Thioredoxin reductase 37237-44-8, Ceramide glucosyltransferase 42616-26-2, Methyl sterol oxidase 51901-16-7, Acylglycerol phosphate acyltransferase 61229-81-0, Methionine aminopeptidase 64885-84-3, Spermidine acetyltransferase 79747-53-8, Tyrosine phosphatase 87397-91-9, Thymosin β 10 117147-70-3, Amphiregulin 125978-95-2, Nitric oxide synthase 133249-66-8, Elafin 139691-76-2, c-Raf-1 kinase 142008-29-5, Protein kinase A 142805-58-1, Mitogen-activated Protein kinase kinase 144713-50-8, ERK3 protein kinase 154835-90-2, Adrenomedullin 157857-10-8, Prostatin 172306-54-6, Protein kinase LIMK-2 187414-15-9, Cystatin M 329900-75-6, Cyclooxygenase 2 362479-32-1, Protein phosphatase 1 362674-81-5, Protein phosphatase 2A 366806-33-9, Casein kinase II

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(screening methods to identify compds. that modulate a gene expression response of a cell to UV radiation exposure)

RN 9001-67-6 HCAPLUS

CN Neuraminidase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9013-08-5 HCAPLUS

CN Carboxykinase, phosphoenolpyruvate (guanosine triphosphate) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9013-18-7 HCAPLUS

CN Synthetase, acyl coenzyme A (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9014-08-8 HCAPLUS

CN Hydratase, phosphoenolpyruvate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9014-20-4 HCAPLUS

CN Dehydrogenase, pyruvate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9014-34-0 HCAPLUS

CN Desaturase, acyl coenzyme A (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9014-46-4 HCAPLUS

CN Transaldolase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9023-58-9 HCAPLUS

CN Synthetase, argininosuccinate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9023-64-7 HCAPLUS

CN Synthetase, γ -glutamylcysteine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9023-69-2 HCAPLUS

CN Synthetase, asparagine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9024-70-8 HCAPLUS

CN Decarboxylase, uroporphyrinogen (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9025-06-3 HCAPLUS

CN Deaminase, cytidine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9026-04-4 HCAPLUS

CN Sulfurtransferase, thiosulfate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9026-59-9 HCAPLUS

CN Kinase (phosphorylating), guanylate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9027-95-6 HCAPLUS

CN Lyase, adenosine triphosphate citrate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9028-12-0 HCAPLUS

CN Dehydrogenase, alcohol (nicotinamide adenine dinucleotide phosphate) (9CI)
(CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9028-98-2 HCAPLUS

CN Dehydrogenase, aminobutyraldehyde (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9029-17-8 HCAPLUS

CN Reductase, pyrroline-5-carboxylate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9029-62-3 HCAPLUS

CN Oxygenase, squalene mono- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9030-21-1 HCAPLUS

CN Phosphorylase, purine nucleoside (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9030-22-2 HCAPLUS

CN Phosphorylase, uridine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9031-71-4 HCAPLUS

CN Synthetase, alanyl-transfer ribonucleate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9035-42-1 HCAPLUS

CN Cytochrome c1 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9035-58-9 HCAPLUS

CN Blood-coagulation factor III (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9037-62-1 HCAPLUS

CN Synthetase, glycyl-transfer ribonucleate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9045-77-6 HCAPLUS

CN Synthetase, fatty acid (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9059-16-9 HCAPLUS

CN Oxygenase, alkane 1-mono- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9074-14-0 HCAPLUS

CN Reductase, thioredoxin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 37237-44-8 HCAPLUS

CN Glucosyltransferase, uridine diphosphoglucose-ceramide (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 42616-26-2 HCAPLUS

CN Oxidase, methylsterol (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 51901-16-7 HCAPLUS

CN Acyltransferase, 1-acylglycerol phosphate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 61229-81-0 HCAPLUS

CN Aminopeptidase, methionine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 64885-84-3 HCAPLUS

CN Acetyltransferase, spermidine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 79747-53-8 HCAPLUS

CN Phosphatase, phosphoprotein (phosphotyrosine) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 87397-91-9 HCAPLUS

CN Thymosin β 10 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 117147-70-3 HCAPLUS

CN Amphiregulin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 125978-95-2 HCAPLUS

CN Synthase, nitric oxide (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 133249-66-8 HCAPLUS

CN Proteinase inhibitor, elafin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 139691-76-2 HCAPLUS

CN Kinase (phosphorylating), gene raf-1 protein (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 142008-29-5 HCAPLUS

CN Kinase (phosphorylating), protein, A (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 142805-58-1 HCAPLUS

CN Kinase (phosphorylating), mitogen-activated protein kinase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 144713-50-8 HCAPLUS

CN Kinase (phosphorylating), protein, ERK3 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 154835-90-2 HCAPLUS

CN Adrenomedullin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 157857-10-8 HCAPLUS

CN Prostasin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 172306-54-6 HCAPLUS

CN Kinase (phosphorylating), protein, LIMK-2 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 187414-15-9 HCAPLUS

CN Proteinase inhibitor, cystatin M (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 329900-75-6 HCAPLUS

CN Synthetase, prostaglandin endoperoxide, 2 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 362479-32-1 HCAPLUS

CN Phosphatase, protein phosphoserine/phosphothreonine, 1 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 362674-81-5 HCAPLUS

CN Phosphatase, protein phosphoserine/phosphothreonine, 2A (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 366806-33-9 HCAPLUS

CN Kinase (phosphorylating), casein, II (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 37205-63-3, ATP synthase

RL: BSU (Biological study, unclassified); BUU (Biological use,

unclassified); BIOL (Biological study); USES (Uses)
(subunit 9; screening methods to identify compds. that modulate a gene
expression response of a cell to UV radiation
exposure)

RN 37205-63-3 HCAPLUS

CN Synthase, adenosine triphosphate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 9001-16-5, Cytochrome oxidase

RL: BSU (Biological study, unclassified); BUU (Biological use,
unclassified); BIOL (Biological study); USES (Uses)
(subunit VIIa-L; screening methods to identify compds. that modulate a
gene expression response of a cell to UV radiation
exposure)

RN 9001-16-5 HCAPLUS

CN Oxidase, cytochrome (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 114949-22-3, Activin

RL: BSU (Biological study, unclassified); BUU (Biological use,
unclassified); BIOL (Biological study); USES (Uses)
(BB; screening methods to identify compds. that modulate a gene
expression response of a cell to UV radiation
exposure)

RN 114949-22-3 HCAPLUS

CN Activin (protein) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L45 ANSWER 10 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:923151 HCAPLUS

DOCUMENT NUMBER: 136:199489

TITLE: Uptake of DL-2-hydroxy-4-methylthio-butanoic acid
(DL-HMB) in the broiler liver in vivo

AUTHOR(S): Wang, S.; Bottje, W. G.; Song, Z.; Beers, K.;
Vazques-Anon, M.; Dibner, J. J.

CORPORATE SOURCE: Department of Poultry Science, University of Arkansas,
Fayetteville, AR, 72701, USA

SOURCE: Poultry Science (2001), 80(11), 1619-1624

CODEN: POSCAL; ISSN: 0032-5791

PUBLISHER: Poultry Science Association, Inc.

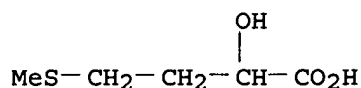
DOCUMENT TYPE: Journal

LANGUAGE: English

AB The methionine source DL-2-hydroxy-4-methylthio-butanoic acid (DL-HMB;
Alimet feed supplement) is widely used in the poultry industry. The
purpose of this study was to determine the capacity of the broiler liver to
remove DL-HMB from the circulation. Cannulae were implanted in the
carotid artery and hepatic and hepatic portal veins in anesthetized male
broilers (3.33 ± 0.13 kg BW). In Experiment 1, birds ($n = 5$) were infused
with DL-HMB solns. (diluted in saline, pH 7.2 to 7.4) into the hepatic
portal vein at rates ranging from 4.4 to 22 mg/min per kg BW, whereas in
Experiment 2, birds ($n = 6$) were infused with DL-HMB at rates ranging from 2.2
to 4.4 mg/min per kg BW. Plasma samples from each vessel were obtained
before and after each 10-min DL-HMB infusion period with a 10-min
clearance period allowed between each DL-HMB infusion. Regression anal.
revealed a highly significant correlation in the amount of DL-HMB entering
the liver via afferent vessels (afferent DL-HMB) and DL-HMB removed by the
liver ($y = 0.86(x) - 173$, $r^2 = 0.98$). The slope of this regression
indicates that 86% of DL-HMB entering in afferent blood (i.e. from both
the hepatic artery and hepatic portal vein) was removed or that the liver

apparently metabolized 86% of the DL-HMB that entered the liver. The results indicate that the broiler liver has the capacity to remove DL-HMB from the circulation far in excess of that needed to metabolize DL-HMB that would enter the liver following **gastrointestinal** absorption in birds fed a conventional poultry diet. In addition, present results implicate the liver as a major site of removal from circulation and further metabolism of DL-HMB in chickens.

IT 583-91-5, Alimet
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (uptake of DL-2-hydroxy-4-methylthio-butanoic acid in the broiler liver in vivo)
 RN 583-91-5 HCAPLUS
 CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 11 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2001:537491 HCAPLUS
 DOCUMENT NUMBER: 135:117260
 TITLE: Therapeutic use of D-methionine to reduce the toxicity of ototoxic drugs, noise, and radiation
 INVENTOR(S): Campbell, Kathleen C. M.
 PATENT ASSIGNEE(S): Southern Illinois University School of Medicine, USA
 SOURCE: U.S., 23 pp., Cont.-in-part of U.S. 6,187,817.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6265386	B1	20010724	US 1998-57065	19980408
US 6187817	B1	20010213	US 1997-942845	19971002
PT 1019036	T	20031128	PT 1998-915362	19980408
ES 2202834	T3	20040401	ES 1998-915362	19980408
US 2002019443	A1	20020214	US 2001-911195	20010723
US 2004110719	A1	20040610	US 2003-694448	20031027
US 2004127568	A1	20040701	US 2003-694432	20031027
PRIORITY APPLN. INFO.:			US 1997-942845	A2 19971002
			US 1996-27750P	P 19961003
			US 1998-57065	A2 19980408
			US 2001-911195	A1 20010723

AB Methods of preventing or reducing hearing or balance loss, damage to ear cells, weight loss, **gastrointestinal** toxicity, **neurotoxicity**, **alopecia**, and prolonging survival in patients undergoing treatment with therapeutically effective amts. of platinum-containing chemotherapeutic agents such as cisplatin are provided. Methods are also provided for preventing or reducing such symptoms in patients undergoing treatment with loop diuretics, aminoglycoside antibiotics, iron chelating agents, quinine, and quinidine, or those who have been exposed to toxic levels of noise or radiation. These methods

comprise administering an effective amount of a **methionine** protective agent, such as D-**methionine**, prior to, simultaneously with, or subsequently to administration of the platinum-containing chemotherapeutic agent, loop diuretic agent, etc., or **exposure** to noise or **radiation**. Combinations of these time periods can also be employed.

IT 7439-89-6, Iron, biological studies

RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(chelating agents; therapeutic use of D-**methionine** and related compds. to reduce toxicity of **ototoxic** drugs, noise, platinum-containing antitumor drugs, and radiation)

RN 7439-89-6 HCAPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

IT 56-54-2, Quinidine 57-92-1, Streptomycin, biological

studies 59-01-8, Kanamycin 114-07-8, Erythromycin

130-95-0, Quinine 1403-66-3, Gentamicin

1404-04-2, Neomycin 1404-90-6, Vancomycin

6379-56-2, Hygromycin 7542-37-2, Paromomycin

14096-51-6, Dichloro(ethylenediamine)platinum(II)

14215-58-8, Chloro(diethylenetriamine)platinum(II) chloride

14913-33-8, trans-Diamminedichloroplatinum(II) 15663-27-1

, Cisplatin 20115-64-4 32986-56-4, Tobramycin

37517-28-5, Amikacin 41575-93-3 41575-94-4,

Carboplatin 41666-77-7 56391-56-1, Netilmicin

62928-11-4, Iproplatin 64363-09-3 67254-31-3

74790-08-2, Spiroplatin 114579-59-8 141610-50-6

148977-78-0 149055-58-3

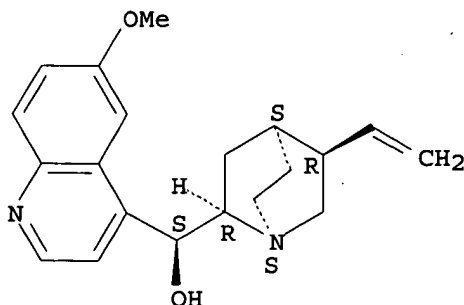
RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(therapeutic use of D-**methionine** and related compds. to reduce toxicity of **ototoxic** drugs, noise, platinum-containing antitumor drugs, and radiation)

RN 56-54-2 HCAPLUS

CN Cinchonan-9-ol, 6'-methoxy-, (9S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



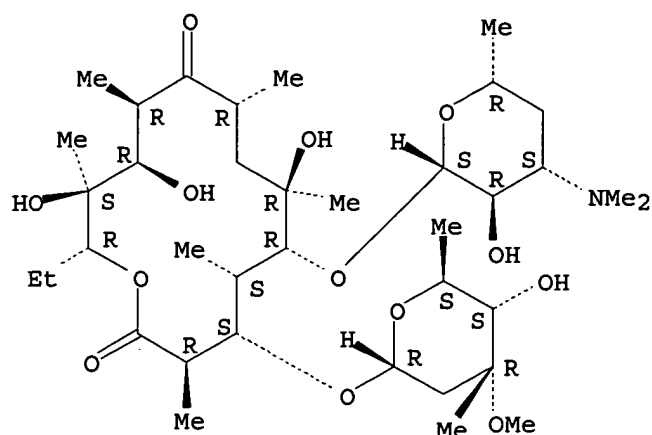
RN 57-92-1 HCAPLUS

CN D-Streptamine, O-2-deoxy-2-(methylamino)- α -L-glucopyranosyl-(1 \rightarrow 2)-O-5-deoxy-3-C-formyl- α -L-lyxofuranosyl-(1 \rightarrow 4)-N,N'-bis(aminoiminomethyl)- (9CI) (CA INDEX NAME)

CN D-Streptamine, O-3-amino-3-deoxy- α -D-glucopyranosyl-(1 \rightarrow 6)-O-[6-amino-6-deoxy- α -D-glucopyranosyl-(1 \rightarrow 4)]-2-deoxy- (9CI)
(CA INDEX NAME)

CN Erythromycin (8CI, 9CI) (CA INDEX NAME)

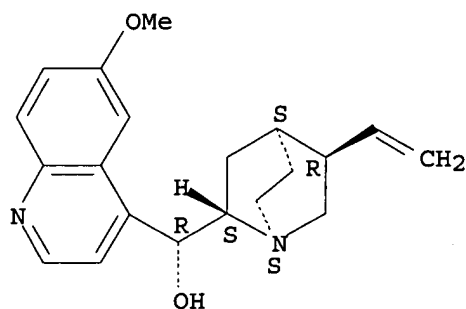
Absolute stereochemistry. Rotation (-).



RN 130-95-0 HCAPLUS

CN Cinchonan-9-ol, 6'-methoxy-, (8 α ,9R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 1403-66-3 HCAPLUS

CN Gentamicin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 1404-04-2 HCAPLUS

CN Neomycin (9CI) (CA INDEX NAME)

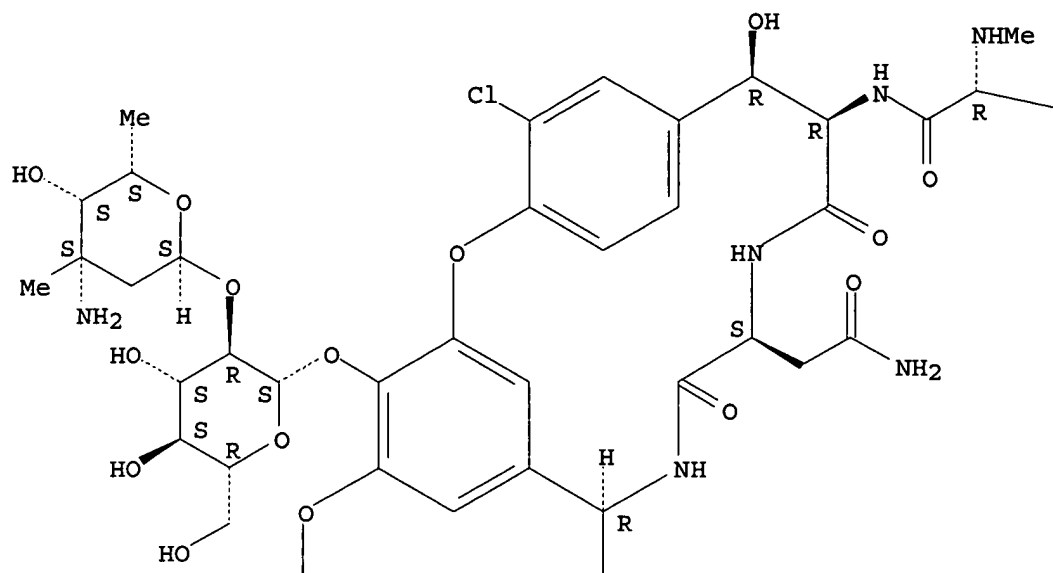
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 1404-90-6 HCAPLUS

CN Vancomycin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

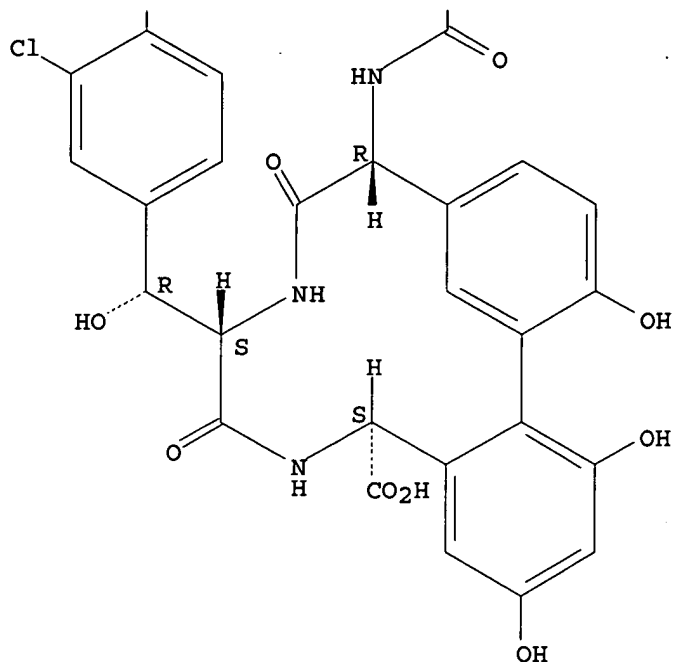
PAGE 1-A



PAGE 1-B

— Bu-i

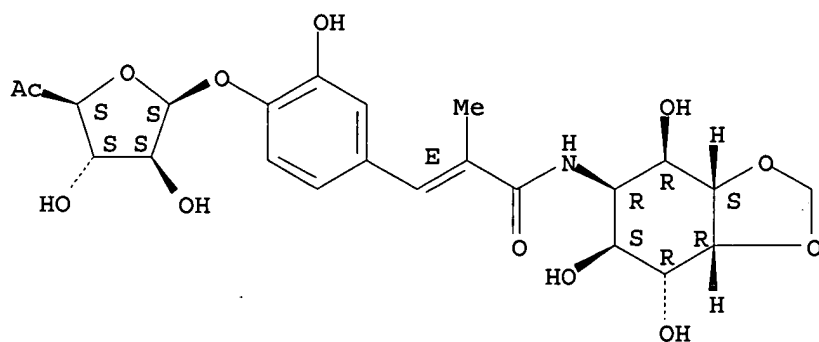
PAGE 2-A



RN 6379-56-2 HCAPLUS

CN D-neo-Inositol, 5-deoxy-5-[[[(2E)-3-[4-[(6-deoxy-β-D-arabino-hexofuranos-5-ulos-1-yl)oxy]-3-hydroxyphenyl]-2-methyl-1-oxo-2-propenyl]amino]-1,2-O-methylene- (9CI) (CA INDEX NAME)

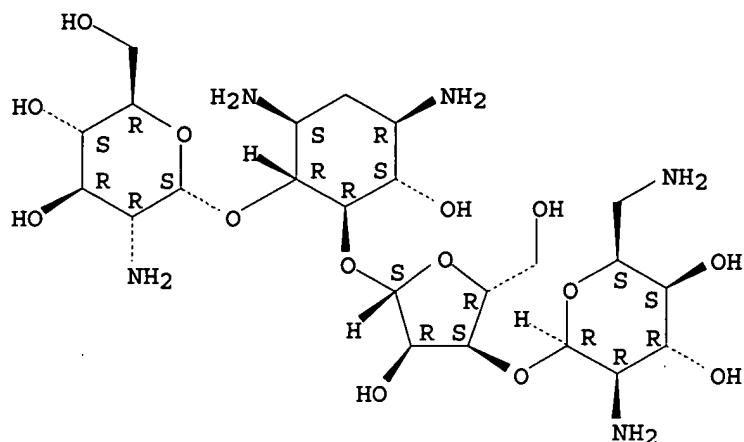
Absolute stereochemistry.
Double bond geometry as shown.



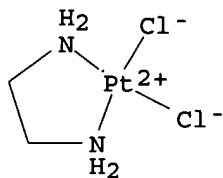
RN 7542-37-2 HCAPLUS

CN D-Streptamine, O-2-amino-2-deoxy-α-D-glucopyranosyl-(1→4)-O-[O-2,6-diamino-2,6-dideoxy-β-L-idopyranosyl-(1→3)-β-D-ribofuranosyl-(1→5)]-2-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

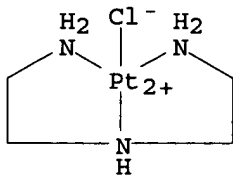


RN 14096-51-6 HCAPLUS

CN Platinum, dichloro(1,2-ethanediamine-κN,κN')-, (SP-4-2)- (9CI)
(CA INDEX NAME)

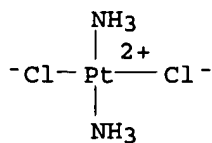
RN 14215-58-8 HCAPLUS

CN Platinum(1+), [N-[2-(amino-κN)ethyl]-1,2-ethanediamine-κN,κN']chloro-, chloride, (SP-4-2)- (9CI) (CA INDEX NAME)

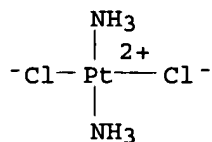
● Cl⁻

RN 14913-33-8 HCAPLUS

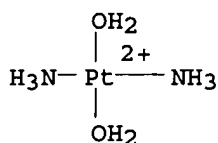
CN Platinum, diamminedichloro-, (SP-4-1)- (9CI) (CA INDEX NAME)



RN 15663-27-1 HCAPLUS
 CN Platinum, diamminedichloro-, (SP-4-2)- (9CI) (CA INDEX NAME)

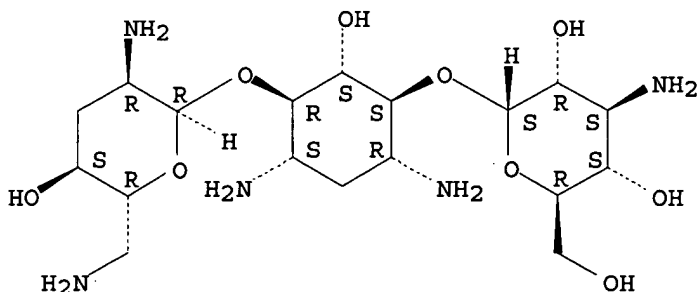


RN 20115-64-4 HCAPLUS
 CN Platinum(2+), diamminediaqua-, (SP-4-2)- (9CI) (CA INDEX NAME)



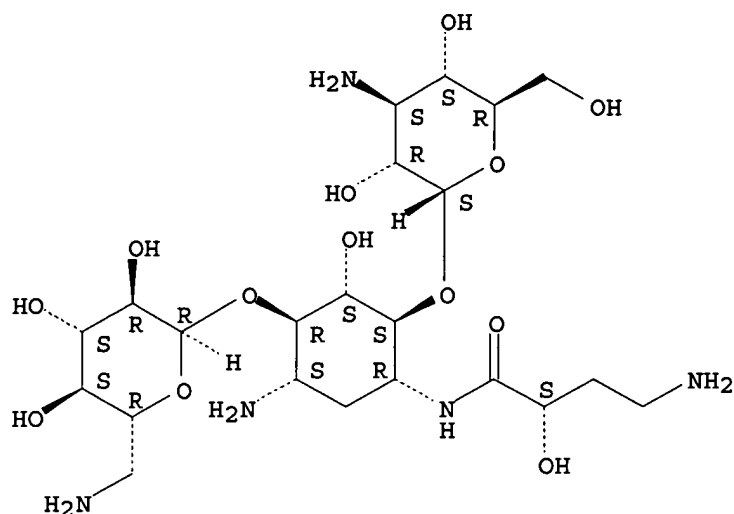
RN 32986-56-4 HCAPLUS
 CN D-Streptamine, O-3-amino-3-deoxy- α -D-glucopyranosyl-(1 \rightarrow 6)-O-[2,6-diamino-2,3,6-trideoxy- α -D-ribo-hexopyranosyl-(1 \rightarrow 4)]-2-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



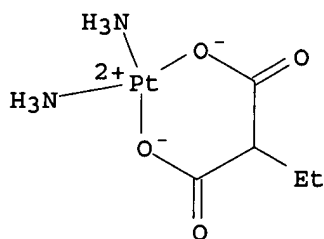
RN 37517-28-5 HCAPLUS
 CN D-Streptamine, O-3-amino-3-deoxy- α -D-glucopyranosyl-(1 \rightarrow 6)-O-[6-amino-6-deoxy- α -D-glucopyranosyl-(1 \rightarrow 4)]-N1-[(2S)-4-amino-2-hydroxy-1-oxobutyl]-2-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



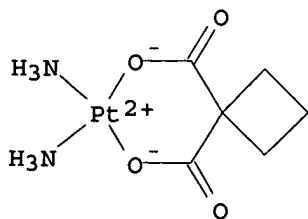
RN 41575-93-3 HCAPLUS

CN Platinum, diammine[ethylpropanedioato(2-)-κO1,κO3]-, (SP-4-2)-
(9CI) (CA INDEX NAME)



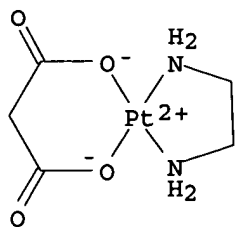
RN 41575-94-4 HCAPLUS

CN Platinum, diammine[1,1-cyclobutanedi(carboxylato-κO)(2-)]-,
(SP-4-2)- (9CI) (CA INDEX NAME)



RN 41666-77-7 HCAPLUS

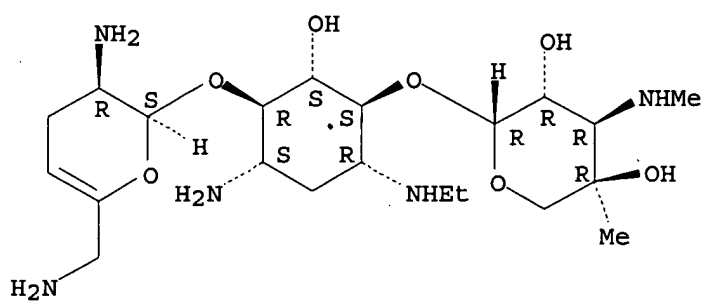
CN Platinum, (1,2-ethanediamine-κN,κN')[propanedioato(2-)-
κO1,κO3]-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 56391-56-1 HCAPLUS

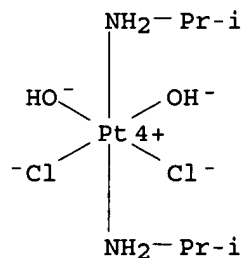
CN D-Streptamine, 0-3-deoxy-4-C-methyl-3-(methylamino)- β -L-arabinopyranosyl-(1 \rightarrow 6)-O-[2,6-diamino-2,3,4,6-tetradeoxy- α -D-glycero-hex-4-enopyranosyl-(1 \rightarrow 4)]-2-deoxy-N1-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



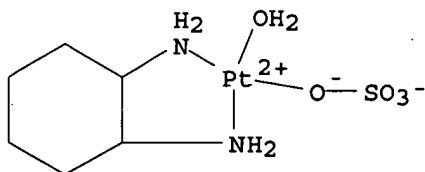
RN 62928-11-4 HCAPLUS

CN	Platinum, dichlorodihydroxybis(2-propanamine)-, (OC-6-33)- (9CI) (CA INDEX NAME)
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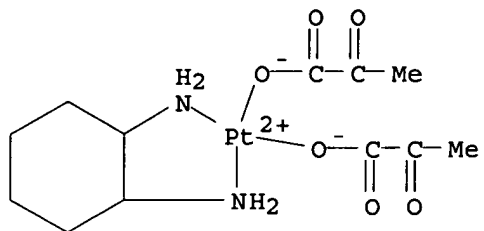


RN 64363-09-3 HCAPLUS

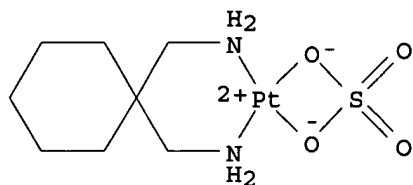
CN Platinum, aqua(1,2-cyclohexanediamine-κN,κN') [sulfato(2-)-κO]-, (SP-4-3) - (9CI) (CA INDEX NAME)



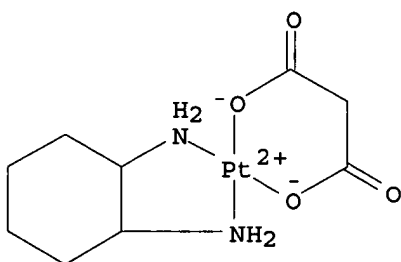
RN 67254-31-3 HCAPLUS
 CN Platinum, (1,2-cyclohexanediamine- κ N, κ N')bis(2-oxopropanoato- κ O)-, (SP-4-2)- (9CI) (CA INDEX NAME)



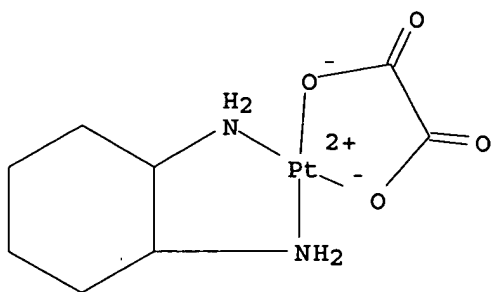
RN 74790-08-2 HCAPLUS
 CN Platinum, (1,1-cyclohexanedimethanamine- κ N, κ N') [sulfato(2-)- κ O, κ O']-, (SP-4-2)- (9CI) (CA INDEX NAME)



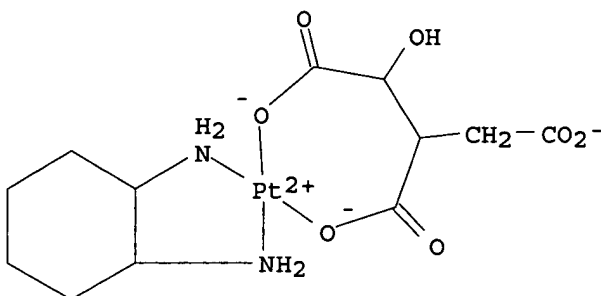
RN 114579-59-8 HCAPLUS
 CN Platinum, (1,2-cyclohexanediamine- κ N, κ N') [propanedioato(2-)- κ O1, κ O3]-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 141610-50-6 HCAPLUS
 CN Platinum, (1,2-cyclohexanediamine- κ N, κ N') [ethanedioato(2-)- κ O1, κ O2]-, (SP-4-2)- (9CI) (CA INDEX NAME)

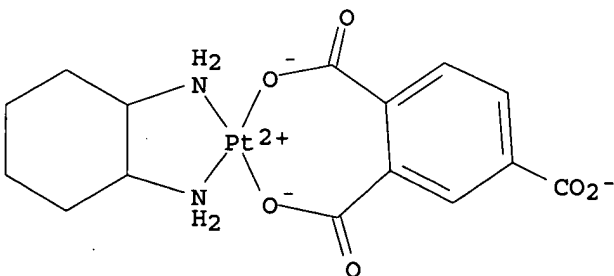


RN 148977-78-0 HCAPLUS
 CN Platinate(1-), (1,2-cyclohexanediamine- κ N, κ N') [1-hydroxy-1,2,3-propanetricarboxylato(3-)- κ O1, κ O2]-, hydrogen, (SP-4-3)- (9CI)
 (CA INDEX NAME)



● H⁺

RN 149055-58-3 HCAPLUS
 CN Platinate(1-), [1,2,4-benzenetricarboxylato(3-)- κ O1, κ O2] (1,2-cyclohexanediamine- κ N, κ N')-, hydrogen, (SP-4-3)- (9CI) (CA INDEX NAME)



● H⁺

IT 59-51-8, Methionine 63-68-3, L-
 Methionine, biological studies 348-67-4, D-

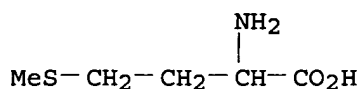
Methionine 502-83-0, Methioninol 1319-79-5
6094-76-4, Homomethionine 13073-35-3,
Ethionine 29908-03-0, S-Adenosyl-L-methionine

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(therapeutic use of D-methionine and related compds. to reduce toxicity of **ototoxic** drugs, noise, platinum-containing antitumor drugs, and radiation)

RN 59-51-8 HCAPLUS

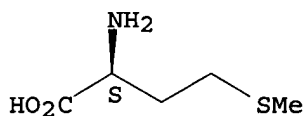
CN Methionine (9CI) (CA INDEX NAME)



RN 63-68-3 HCAPLUS

CN L-Methionine (9CI) (CA INDEX NAME)

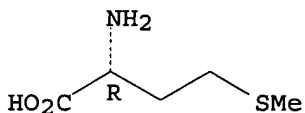
Absolute stereochemistry.



RN 348-67-4 HCAPLUS

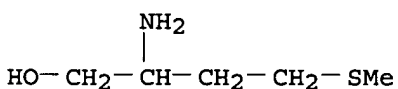
CN D-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



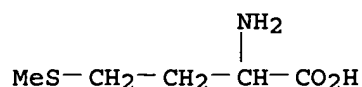
RN 502-83-0 HCAPLUS

CN 1-Butanol, 2-amino-4-(methylthio)- (7CI, 8CI, 9CI) (CA INDEX NAME)



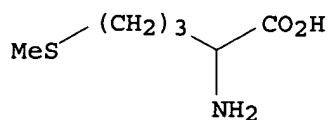
RN 1319-79-5 HCAPLUS

CN L-Methionine, hydroxy- (9CI) (CA INDEX NAME)



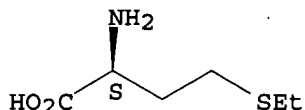
D1-OH

RN 6094-76-4 HCAPLUS
 CN Norvaline, 5-(methylthio)- (9CI) (CA INDEX NAME)



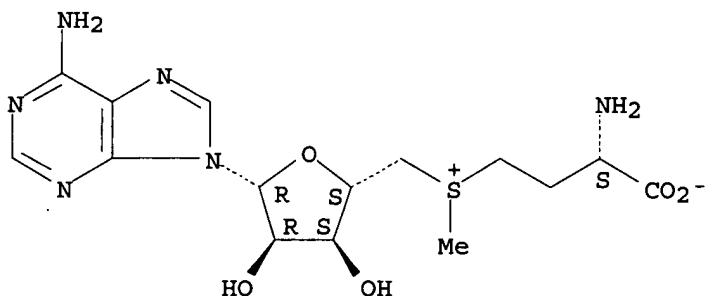
RN 13073-35-3 HCAPLUS
 CN L-Homocysteine, S-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 29908-03-0 HCAPLUS
 CN Adenosine, 5'-[[[(3S)-3-amino-3-carboxypropyl]methylsulfonio]-5'-deoxy-,
 inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 72 THERE ARE 72 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 12 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2001:338742 HCAPLUS
 DOCUMENT NUMBER: 134:352782
 TITLE: Oligomers and oligomeric segments of α -hydroxy
 carboxylic acids and α -amino acids and uses in
 improving bioavailability of nutrition supplement for
 ruminants

INVENTOR(S): Lorbert, Stephen J.; Schasteen, Charles S.; Nam, Paul
K. S.; Forciniti, Daniel; Rajesh, Mathur P.; Kapila,
Shubhender
PATENT ASSIGNEE(S): Novus International, Inc., USA
SOURCE: PCT Int. Appl., 116 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001032906	A2	20010510	WO 2000-US29897	20001030
WO 2001032906	A3	20020214		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1224318	A2	20020724	EP 2000-976719	20001030
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
PRIORITY APPLN. INFO.:			US 1999-162725P	P 19991029
			WO 2000-US29897	W 20001030

OTHER SOURCE(S): MARPAT 134:352782

AB The invention is relates to the enzymic synthesis and composition of α -hydroxy carboxylic acid and α -amino acid or peptide co-oligomers wherein a residue of the α -hydroxy carboxylic acid is linked to a residue of the α -amino acid or peptide by an amide linkage. Proteolytic enzyme papain catalyzes co-oligomerization of the α -hydroxy carboxylic acid and α -amino acid. The degree and distribution of oligomerization varies upon the type and concns. of different reaction mixts. utilized and upon the length of allowed reaction time. The present invention is further directed to a process for the preparation of an oligomer. The process comprises preparing a mixture containing (i) an

enzyme, (ii) an α -hydroxycarboxylic acid and (iii) an α -amino acid or a peptide oligomer. The α -hydroxy carboxylic acid and the α -amino acid each are present in the mixture as a free acid, acid halide, amide, ester or anhydride independently of the other. The process further comprises forming an amide linkage between the residue of the α -hydroxy carboxylic acid and the residue of the α -amino acid or the peptide oligomer. The resultant oligomers may be provided to ruminants as bioavailable amino acid supplements that are resistant to degradation in the rumen.

IT 63-68-3, Methionine, biological studies

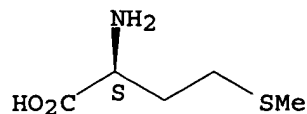
RL: BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)

(2-hydroxy analog (MHBA), oligomerization of; oligomers and oligomeric segments of α -hydroxy carboxylic acids and α -amino acids and uses in improving bioavailability of nutrition supplement for ruminants)

RN 63-68-3 HCAPLUS

CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 171040-67-8, Cardosin

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(A or B, catalyzing co-oligomerization of the α -hydroxy carboxylic acid and α -amino acid; oligomers of α -hydroxy carboxylic acids and α -amino acids and uses in improving bioavailability of nutrition supplement for ruminants)

RN 171040-67-8 HCAPLUS

CN Cardosin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 9016-18-6, Esterase

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(Liver, catalyzing co-oligomerization of the α -hydroxy carboxylic acid and α -amino acid; oligomers of α -hydroxy carboxylic acids and α -amino acids and uses in improving bioavailability of nutrition supplement for ruminants)

RN 9016-18-6 HCAPLUS

CN Esterase, carboxyl (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 60-18-4, Tyrosine, biological studies 61-90-5, Leucine, biological studies 63-91-2, L-Phenylalanine, biological studies

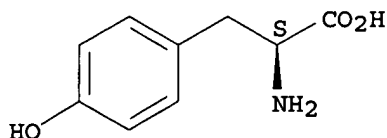
RL: BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)

(MHBA-, co-oligomer with tyrosine oligomers; oligomers and oligomeric segments of α -hydroxy carboxylic acids and α -amino acids and uses in improving bioavailability of nutrition supplement for ruminants)

RN 60-18-4 HCAPLUS

CN L-Tyrosine (9CI) (CA INDEX NAME)

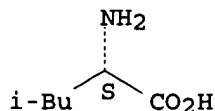
Absolute stereochemistry. Rotation (-).



RN 61-90-5 HCAPLUS

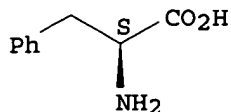
CN L-Leucine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 63-91-2 HCAPLUS
 CN L-Phenylalanine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 115288-50-1, Peptide synthetase
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)

(Nonribosomal, catalyzing co-oligomerization of the α -hydroxy
 carboxylic acid and α -amino acid; oligomers of α -hydroxy
 carboxylic acids and α -amino acids and uses in improving
 bioavailability of nutrition supplement for ruminants)

RN 115288-50-1 HCAPLUS
 CN Synthetase, peptide (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 9001-03-0, Carbonicanhydrase 9001-92-7, Protease
 9002-04-4, Thrombin 9014-01-1, Subtilisin
 9036-06-0, Pronase 9073-78-3, Thermolysin
 37259-58-8, Serine proteinase 37353-41-6
 50936-52-2, Microbial Acid protease 50936-53-3
 81669-70-7, Metalloproteinase
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)

(catalyzing co-oligomerization of the α -hydroxy carboxylic acid
 and α -amino acid; oligomers and oligomeric segments of
 α -hydroxy carboxylic acids and α -amino acids and uses in
 improving bioavailability of nutrition supplement for ruminants)

RN 9001-03-0 HCAPLUS
 CN Dehydratase, carbonate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9001-92-7 HCAPLUS
 CN Proteinase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9002-04-4 HCAPLUS
 CN Thrombin (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9014-01-1 HCAPLUS
 CN Subtilisin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9036-06-0 HCAPLUS
 CN Proteinase, Streptomyces griseus (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9073-78-3 HCAPLUS
 CN Thermolysin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 37259-58-8 HCAPLUS

CN Proteinase, serine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 37353-41-6 HCAPLUS

CN Proteinase, cysteine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 50936-52-2 HCAPLUS

CN Proteinase, microbial acid (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 50936-53-3 HCAPLUS

CN Proteinase, microbial alkaline (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 81669-70-7 HCAPLUS

CN Proteinase, metallo- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 9031-96-3, Peptidase

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(intestinal, oligomers resistant to; oligomers and oligomeric segments of α -hydroxy carboxylic acids and α -amino acids and uses in improving bioavailability of nutrition supplement for ruminants)

RN 9031-96-3 HCAPLUS

CN Peptidase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 17655-31-1, Amide

RL: BSU (Biological study, unclassified); BIOL (Biological study) (oligomers and oligomeric segments of α -hydroxy carboxylic acids and α -amino acids and uses in improving bioavailability of nutrition supplement for ruminants)

RN 17655-31-1 HCAPLUS

CN Amide (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

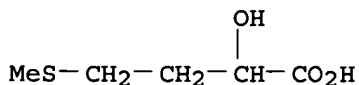
NH₂⁻

IT 583-91-5, 2-Hydroxy-4-(methylthio)butyric acid

RL: RCT (Reactant); RACT (Reactant or reagent) (oligomers and oligomeric segments of α -hydroxy carboxylic acids and α -amino acids and uses in improving bioavailability of nutrition supplement for ruminants)

RN 583-91-5 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



IT 9001-75-6, Pepsin 9002-07-7, Trypsin 9004-07-3

, Chymotrypsin 11075-17-5, Carboxy-peptidase A

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(oligomers resistant to; oligomers and oligomeric segments of

α -hydroxy carboxylic acids and α -amino acids and uses in
improving bioavailability of nutrition supplement for ruminants)

RN 9001-75-6 HCAPLUS

CN Pepsin A (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9002-07-7 HCAPLUS

CN Trypsin (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9004-07-3 HCAPLUS

CN Chymotrypsin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 11075-17-5 HCAPLUS

CN Carboxypeptidase A (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 820-10-0P, Methionine sulfone

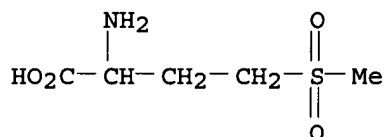
RL: AGR (Agricultural use); PRP (Properties); SPN (Synthetic preparation);

BIOL (Biological study); PREP (Preparation); USES (Uses)

(poly-; oligomers and oligomeric segments of α -hydroxy carboxylic
acids and α -amino acids and uses in improving bioavailability of
nutrition supplement for ruminants)

RN 820-10-0 HCAPLUS

CN Butanoic acid, 2-amino-4-(methylsulfonyl)- (9CI) (CA INDEX NAME)



IT 9001-73-4, Papain

RL: AGR (Agricultural use); BAC (Biological activity or effector, except
adverse); BSU (Biological study, unclassified); BIOL (Biological study);
USES (Uses)

(thiol-protease, catalyzing co-oligomerization of the α -hydroxy
carboxylic acid and α -amino acid; oligomers of α -hydroxy
carboxylic acids and α -amino acids and uses in improving
bioavailability of nutrition supplement for ruminants)

RN 9001-73-4 HCAPLUS

CN Papain (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 56-87-1, Lysine, reactions

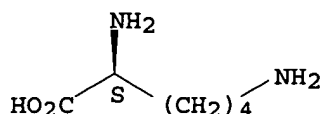
RL: RCT (Reactant); RACT (Reactant or reagent)

(with MHBA, oligomerization and co-oligomerization of; oligomers and
oligomeric segments of α -hydroxy carboxylic acids and
 α -amino acids and uses in improving bioavailability of nutrition
supplement for ruminants)

RN 56-87-1 HCAPLUS

CN L-Lysine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L45 ANSWER 13 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:880940 HCAPLUS

DOCUMENT NUMBER: 134:46786

TITLE: Delayed total release two pulse

gastrointestinal drug delivery system

INVENTOR(S): Penhasi, Adel; Flashner, Moshe; Lerner, E. Itzhak

PATENT ASSIGNEE(S): Perio Products Ltd., Israel

SOURCE: PCT Int. Appl., 96 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000074655	A2	20001214	WO 2000-US15185	20000602
WO 2000074655	A3	20010830		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002110593	A1	20020815	US 1999-325748	19990604
US 6632451	B2	20031014		
EP 1189601	A2	20020327	EP 2000-939503	20000602
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRIORITY APPLN. INFO.:			US 1999-325748	A 19990604
			WO 2000-US15185	W 20000602

AB A two pulse **gastrointestinal** delivery system is provided. The system comprises a desired agent in combination with a swellable core material, the core being surrounded by an inner coat of a water-insol. or relatively water-insol. coating material in which particulate water-insol. material is embedded. The inner coat is addnl. surrounded by an outer coat that contains addnl. amts. of the desired agent. When the delivery device enters the **gastrointestinal** tract, the outer coat releases the desired agent contained therein and disintegrates, exposing the inner coat. The particulate matter in the inner coat takes up liquid, thus forming channels interconnecting the drug-containing core with the outside of the delivery device. Through these channels liquid enters the core which then swells to the point at which the inner coat is broken. When the integrity of the inner coat is destroyed, the core then disintegrates, immediately releasing all or most of the drug at a specific site. By controlling parameters in the device, such as the core material, carrier material in the coating, and particulate matter, the location of release of both pulses of the drug can be carefully controlled. The invention is also directed to a method of using the device for the

treatment of disease by the release of drugs in the **gastrointestinal** tract in a location- and time-dependent manner.

A tablet core was prepared from Ca pectinate 59, Emcocel 20, crosslinked PVP 10, Na diclofenac 10, and Mg stearate 1%.

IT 51-60-5, Neostigmine methyl sulfate 57-47-6, Physostigmine 57-64-7, Physostigmine salicylate 59-99-4, Neostigmine 64-47-1, Physostigmine sulfate 101-26-8, Pyridostigmine bromide 114-80-7, Neostigmine bromide 5104-49-4, Flurbiprofen 15307-86-5, Diclofenac 38194-50-2, Sulindac 123441-03-2, Rivastigmine
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (delayed total release two pulse **gastrointestinal** drug delivery system)

RN 51-60-5 HCAPLUS

CN Benzenaminium, 3-[[[(dimethylamino)carbonyl]oxy]-N,N,N-trimethyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 21228-90-0

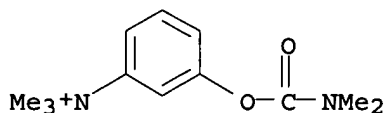
CMF C H3 O4 S

Me-O-SO₃⁻

CM 2

CRN 59-99-4

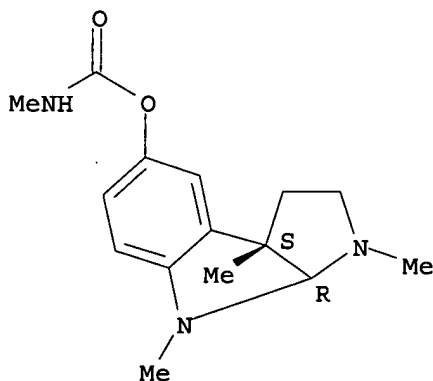
CMF C12 H19 N2 O2



RN 57-47-6 HCAPLUS

CN Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS,8aR)- (9CI) (CA INDEX NAME)

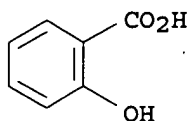
Absolute stereochemistry. Rotation (-).



RN 57-64-7 HCAPLUS
 CN Benzoic acid, 2-hydroxy-, compd. with (3aS,8aR)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo[2,3-b]indol-5-yl methylcarbamate (1:1) (9CI) (CA INDEX NAME)

CM 1

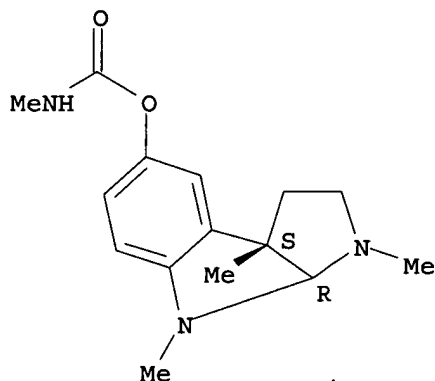
CRN 69-72-7
 CMF C7 H6 O3



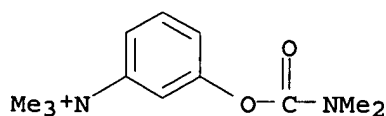
CM 2

CRN 57-47-6
 CMF C15 H21 N3 O2

Absolute stereochemistry. Rotation (-).



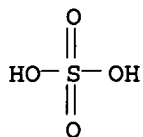
RN 59-99-4 HCAPLUS
 CN Benzenaminium, 3-[[[(dimethylamino)carbonyl]oxy]-N,N,N-trimethyl- (9CI) (CA INDEX NAME)



RN 64-47-1 HCAPLUS
 CN Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS,8aR)-, sulfate (2:1) (salt) (9CI) (CA INDEX NAME)

CM 1

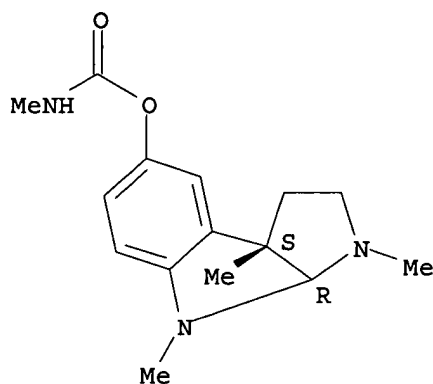
CRN 7664-93-9
CMF H2 O4 S



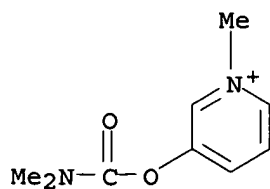
CM 2

CRN 57-47-6
CMF C15 H21 N3 O2

Absolute stereochemistry. Rotation (-).

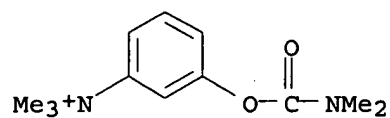


RN 101-26-8 HCAPLUS
CN Pyridinium, 3-[[[(dimethylamino)carbonyl]oxy]-1-methyl-, bromide (9CI) (CA INDEX NAME)



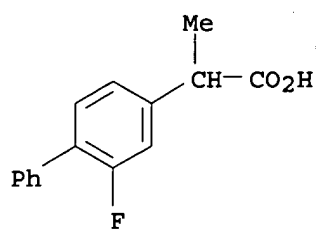
● Br⁻

RN 114-80-7 HCAPLUS
CN Benzenaminium, 3-[[[(dimethylamino)carbonyl]oxy]-N,N,N-trimethyl-, bromide (9CI) (CA INDEX NAME)



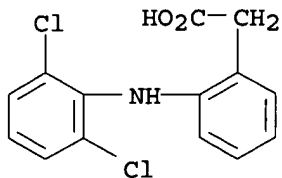
RN 5104-49-4 HCAPLUS

CN [1,1'-Biphenyl]-4-acetic acid, 2-fluoro- α -methyl- (9CI) (CA INDEX NAME)



RN 15307-86-5 HCAPLUS

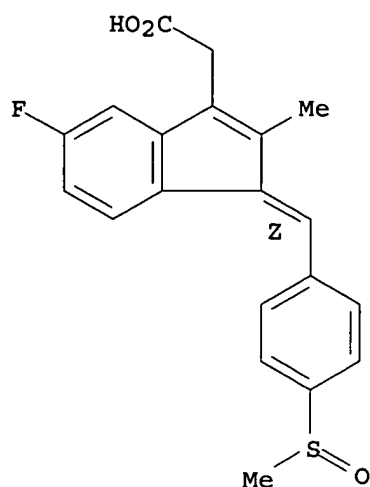
CN Benzeneacetic acid, 2-[(2,6-dichlorophenyl)amino]- (9CI) (CA INDEX NAME)



RN 38194-50-2 HCAPLUS

CN 1H-Indene-3-acetic acid, 5-fluoro-2-methyl-1-[[4-(methylsulfinyl)phenyl]methylene]-, (1Z)- (9CI) (CA INDEX NAME)

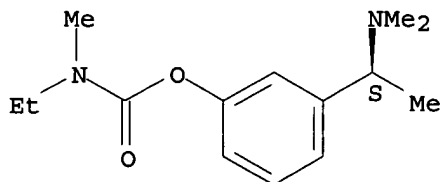
Double bond geometry as shown.



RN 123441-03-2 HCAPLUS

CN Carbamic acid, ethylmethyl-, 3-[(1S)-1-(dimethylamino)ethyl]phenyl ester
(9CI) (CA INDEX NAME)

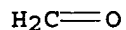
Absolute stereochemistry. Rotation (-).



IT 50-00-0, Formaldehyde, biological studies 54-21-7,
Sodium salicylate 89-78-1, Menthol 106-89-8,
Epichlorohydrin, biological studies 111-30-8, Glutaraldehyde
1303-96-4, Borax 9000-07-1, Carrageenan
9000-30-0, Guar gum 9000-40-2, Locust bean gum
9000-65-1, Gum tragacanth 9000-69-5, Pectin
9003-01-4, Polyacrylic acid 9003-39-8, Crospovidone
9004-32-4, CM-cellulose 9004-34-6, Cellulose, biological
studies 9004-57-3, Ethyl cellulose 9004-62-0,
Hydroxyethyl cellulose 9004-64-2, Hydroxypropyl cellulose
9004-67-5, Methyl cellulose 9005-25-8, Starch,
biological studies 9005-32-7, Alginic acid 9005-35-0,
Calcium alginate 9019-40-3, Aluminum alginate 9019-45-8
, Ferric alginate 9019-49-2, Zinc alginate 11138-66-2,
Xanthan gum 15307-79-6, Sodium diclofenac 24938-16-7,
Eudragit E100 25086-15-1, Methacrylic acid-methyl methacrylate
copolymer 39301-46-7, Calcium pectinate 65546-96-5,
Aluminum pectinate 65546-98-7, Zinc pectinate 66960-34-7
, Metkephamid 81296-72-2, Ferric pectinate 96351-87-0,
Ferrous alginate 223532-50-1, Ferrous pectinate
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(delayed total release two pulse gastrointestinal drug
delivery system)

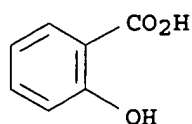
RN 50-00-0 HCAPLUS

CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)



RN 54-21-7 HCAPLUS

CN Benzoic acid, 2-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)

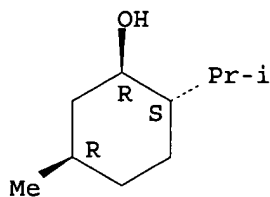


● Na

RN 89-78-1 HCAPLUS

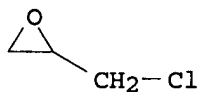
CN Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1R,2S,5R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



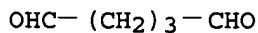
RN 106-89-8 HCAPLUS

CN Oxirane, (chloromethyl)- (9CI) (CA INDEX NAME)



RN 111-30-8 HCAPLUS

CN Pentanedial (9CI) (CA INDEX NAME)



RN 1303-96-4 HCAPLUS

CN Borax (B₄Na₂O₇·10H₂O) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9000-07-1 HCAPLUS

CN Carrageenan (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9000-30-0 HCAPLUS
CN Guar gum (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9000-40-2 HCAPLUS
CN Carob gum (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9000-65-1 HCAPLUS
CN Gum tragacanth (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

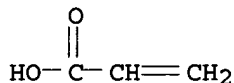
RN 9000-69-5 HCAPLUS
CN Pectin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9003-01-4 HCAPLUS
CN 2-Propenoic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

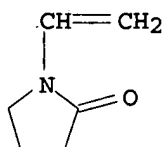
CRN 79-10-7
CMF C3 H4 O2



RN 9003-39-8 HCAPLUS
CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0
CMF C6 H9 N O



RN 9004-32-4 HCAPLUS
CN Cellulose, carboxymethyl ether, sodium salt (8CI, 9CI) (CA INDEX NAME)

CM 1

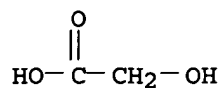
CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 79-14-1

CMF C2 H4 O3



RN 9004-34-6 HCAPLUS
CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9004-57-3 HCAPLUS
CN Cellulose, ethyl ether (8CI, 9CI) (CA INDEX NAME)

CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 64-17-5
CMF C2 H6 O



RN 9004-62-0 HCAPLUS
CN Cellulose, 2-hydroxyethyl ether (8CI, 9CI) (CA INDEX NAME)

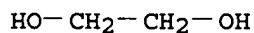
CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 107-21-1
CMF C2 H6 O2



RN 9004-64-2 HCAPLUS
CN Cellulose, 2-hydroxypropyl ether (9CI) (CA INDEX NAME)

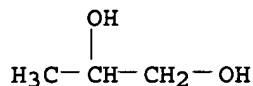
CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 57-55-6
CMF C3 H8 O2



RN 9004-67-5 HCAPLUS
CN Cellulose, methyl ether (8CI, 9CI) (CA INDEX NAME)

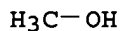
CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 67-56-1
CMF C H4 O



RN 9005-25-8 HCAPLUS
CN Starch (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9005-32-7 HCAPLUS
CN Alginic acid (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9005-35-0 HCAPLUS
CN Alginic acid, calcium salt (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9019-40-3 HCAPLUS
CN Alginic acid, aluminum salt (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9019-45-8 HCAPLUS
CN Alginic acid, iron(3+) salt (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9019-49-2 HCAPLUS
CN Alginic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)

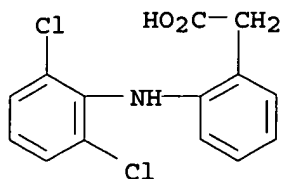
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 11138-66-2 HCAPLUS
CN Xanthan gum (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 15307-79-6 HCAPLUS

CN Benzeneacetic acid, 2-[(2,6-dichlorophenyl)amino]-, monosodium salt (9CI)
(CA INDEX NAME)



● Na

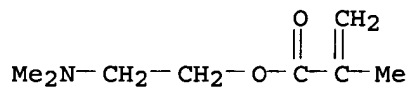
RN 24938-16-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with
2-(dimethylamino)ethyl 2-methyl-2-propenoate and methyl
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 2867-47-2

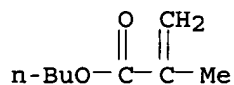
CMF C8 H15 N O2



CM 2

CRN 97-88-1

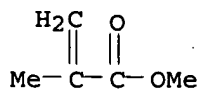
CMF C8 H14 O2



CM 3

CRN 80-62-6

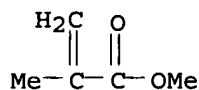
CMF C5 H8 O2



RN 25086-15-1 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, polymer with methyl 2-methyl-2-propenoate
 (9CI) (CA INDEX NAME)

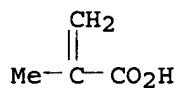
CM 1

CRN 80-62-6
 CMF C5 H8 O2



CM 2

CRN 79-41-4
 CMF C4 H6 O2



RN 39301-46-7 HCAPLUS
 CN Pectin, calcium salt (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 65546-96-5 HCAPLUS
 CN Pectin, aluminum salt (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

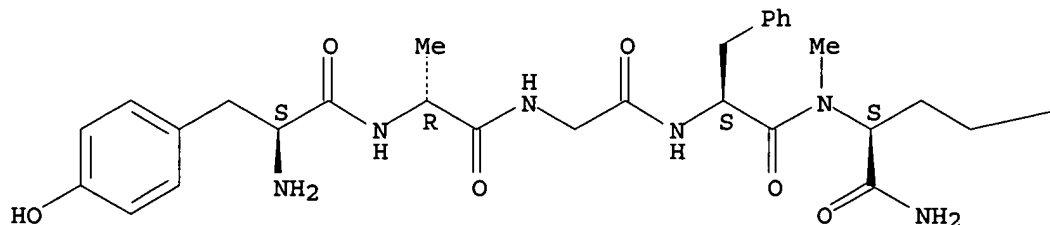
RN 65546-98-7 HCAPLUS
 CN Pectin, zinc salt (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 66960-34-7 HCAPLUS
 CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI)
 (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

—SMe

RN 81296-72-2 HCAPLUS
CN Pectin, iron(3+) salt (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 96351-87-0 HCAPLUS
CN Alginic acid, iron(2+) salt (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 223532-50-1 HCAPLUS
CN Pectin, iron(2+) salt (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 9000-81-1, Acetylcholinesterase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; delayed total release two pulse **gastrointestinal**
drug delivery system)
RN 9000-81-1 HCAPLUS
CN Esterase, acetyl choline (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L45 ANSWER 14 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:664545 HCAPLUS

DOCUMENT NUMBER: 134:55978

TITLE: Effects of DL-methionine hydroxyanalogue (MHA) or
DL-methionine (DL-Met) on N-retention in broiler
chickens and pigs. [Erratum to document cited in
CA132:207304]

AUTHOR(S): Romer, Andrea; Abel, Hj.

CORPORATE SOURCE: Institut fur Tierphysiologie und Tierernahrung,
Gottingen, 37077, GermanySOURCE: Animal Feed Science and Technology (2000), 83(3-4),
325

CODEN: AFSTDH; ISSN: 0377-8401

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

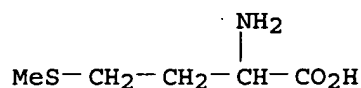
LANGUAGE: English

AB The reference to Walz and Pallauf (1996) was mistakenly cited in Section 4,
page 301, line 9. The correct paragraph should read as follows: "As in
broiler chickens there were also no differences in the effects of the two
methionine sources on weight gain and feeding conversion ratios in pigs. This
result confirms **earlier** studies (Chung and Baker, 1992;
Reifsnnyder et al., 1984), reporting equal effects of DL-Met and DL-MHA on
growth performance in pigs."

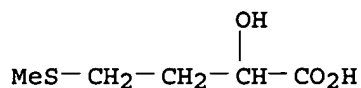
IT 59-51-8, Methionine 583-91-5, Alimet
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(dietary DL-methionine hydroxy analog and DL-methionine effects on
N-retention in broiler chickens and pigs (Erratum))

RN 59-51-8 HCAPLUS

CN Methionine (9CI) (CA INDEX NAME)



RN 583-91-5 HCAPLUS
 CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



L45 ANSWER 15 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:732961 HCAPLUS

DOCUMENT NUMBER: 131:310064

TITLE: Nutrient formulation and process for feeding young poultry and other animals

INVENTOR(S): Ivey, Francis J.; Dibner, Julia J.; Knight, Christopher D.

PATENT ASSIGNEE(S): Novus International, Inc., USA

SOURCE: U.S., 20 pp., Cont.-in-part of U.S. Ser. No. 597,815, abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5985336	A	19991116	US 1996-647719	19960524
US 5928686	A	19990727	US 1995-483297	19950607
CA 2222515	AA	19961219	CA 1996-2222515	19960604
WO 9639862	A1	19961219	WO 1996-US9075	19960604
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML				
AU 9661539	A1	19961230	AU 1996-61539	19960604
AU 723485	B2	20000831		
EP 831718	A1	19980401	EP 1996-919116	19960604
R: BE, DE, DK, ES, FR, GB, IT, LU, NL, MC, PT, IE				
CN 1191469	A	19980826	CN 1996-195727	19960604
JP 11506617	T2	19990615	JP 1996-501482	19960604
ZA 9604883	A	19970107	ZA 1996-4883	19960607
US 5976580	A	19991102	US 1996-760881	19961206
NO 9705691	A	19971205	NO 1997-5691	19971205
US 6329001	B1	20011211	US 1999-333249	19990615
US 6210718	B1	20010403	US 1999-334968	19990617
US 2004052895	A1	20040318	US 2001-792998	20010226
US 6733759	B2	20040511		

PRIORITY APPLN. INFO.:

US 1995-483297	A2	19950607
US 1996-597815	B2	19960207
US 1996-647719	A	19960524
WO 1996-US9075	W	19960604

US 1996-760881 A3 19961206

US 1999-334968 A3 19990617

AB A nutrient formulation including moisture which is designed for use in poultry and other animals, and a method of feeding it which improves subsequent survival, cumulative feed efficiency and weight gain is disclosed. The method comprises making available for consumption ad libitum a high-moisture material containing at least about 20% by weight water to the poultry

or

other animals before they are offered dry food ad libitum.

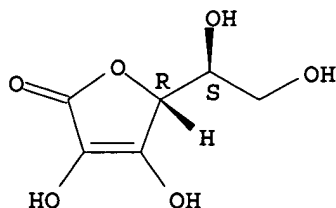
IT 50-81-7, L-Ascorbic acid, biological studies 56-87-1, L-Lysine, biological studies 57-88-5, Cholesterol, biological studies 59-02-9, α -Tocopherol 63-68-3, L-Methionine, biological studies 70-18-8, Glutathione, biological studies 72-19-5, L-Threonine, biological studies 73-22-3, L-Tryptophan, biological studies 74-79-3, L-Arginine, biological studies 77-92-9, biological studies 79-09-4, Propionic acid, biological studies 91-53-2, Ethoxyquin 110-17-8, 2-Butenedioic acid (2E)-, biological studies 128-37-0, Butylated hydroxytoluene, biological studies 154-21-2, Lincomycin 583-91-5, 2-Hydroxy-4-(methylthio)butanoic acid 583-91-5D, 2-Hydroxy-4-(methylthio)butanoic acid, salts 1405-87-4, Bacitracin 7664-38-2, Phosphoric acid, biological studies 7732-18-5, Water, biological studies 9000-01-5, Gum arabic 9000-07-1, Carrageenan 9000-28-6, Gum ghatti 9000-30-0, Guar gum 9000-40-2, Locust bean gum 9000-65-1, Gum tragacanth 9000-69-5, Pectin 9000-92-4, Amylase 9001-42-7, Maltase 9001-62-1, Lipase 9001-75-6, Pepsin 9002-07-7, Trypsin 9002-18-0, Agar 9002-72-6, Somatotropin 9002-76-0, Gastrin 9004-10-8, Insulin, biological studies 9005-25-8, Starch, biological studies 9005-38-3, Algin 9007-12-9, Calcitonin 9007-92-5, Glucagon, biological studies 9061-61-4, Nerve growth factor 11006-76-1, Virginiamycin 11096-26-7, Erythropoietin 25013-16-5, Butylated hydroxyanisole 31362-50-2, Bombesin 37341-53-0, Keratinase 55852-84-1, Bacitracin methylenedisalicylate 61912-98-9, Insulin-like growth factor 62031-54-3, Fibroblast growth factor 62229-50-9, Epidermal growth factor 83869-56-1, Granulocyte-macrophage colony stimulating factor 127464-60-2, Vascular endothelial growth factor 148348-15-6, Fibroblast growth factor 7

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(nutrient formulation and process for feeding young poultry and other animals)

RN 50-81-7 HCAPLUS

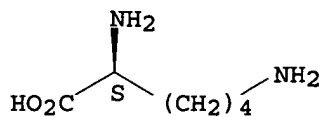
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



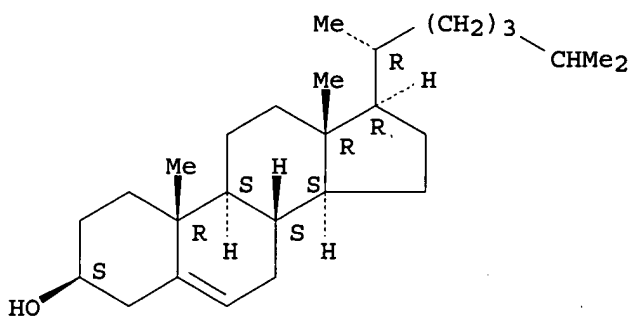
RN 56-87-1 HCAPLUS
CN L-Lysine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



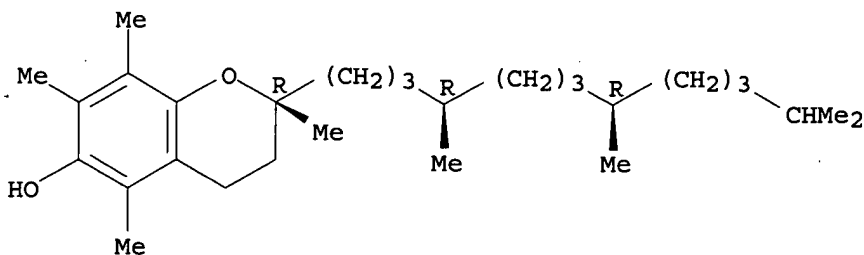
RN 57-88-5 HCAPLUS
CN Cholest-5-en-3-ol (3β) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



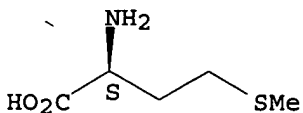
RN 59-02-9 HCAPLUS
CN 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-[(4R,8R)-4,8,12-trimethyltridecyl]-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



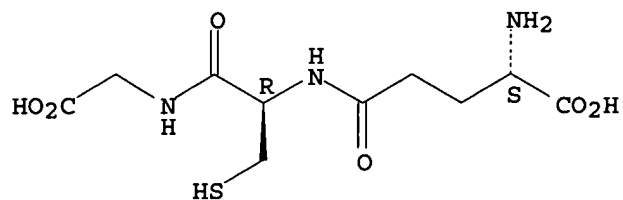
RN 63-68-3 HCAPLUS
CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



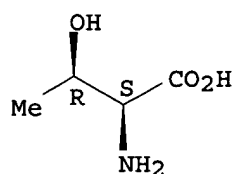
RN 70-18-8 HCAPLUS
CN Glycine, L-γ-glutamyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



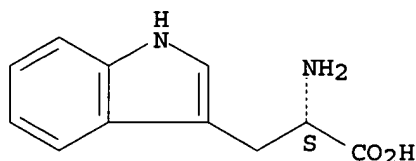
RN 72-19-5 HCAPLUS
CN L-Threonine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



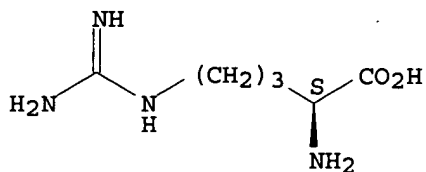
RN 73-22-3 HCAPLUS
CN L-Tryptophan (9CI) (CA INDEX NAME)

Absolute stereochemistry.

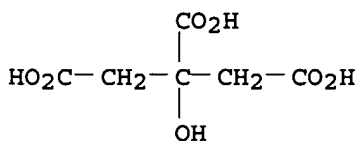


RN 74-79-3 HCAPLUS
CN L-Arginine (9CI) (CA INDEX NAME)

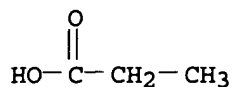
Absolute stereochemistry.



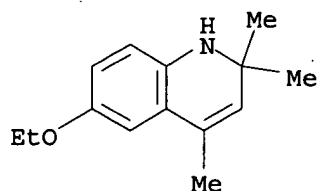
RN 77-92-9 HCAPLUS
CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy- (9CI) (CA INDEX NAME)



RN 79-09-4 HCAPLUS
 CN Propanoic acid (9CI) (CA INDEX NAME)

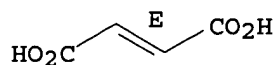


RN 91-53-2 HCAPLUS
 CN Quinoline, 6-ethoxy-1,2-dihydro-2,2,4-trimethyl- (8CI, 9CI) (CA INDEX NAME)

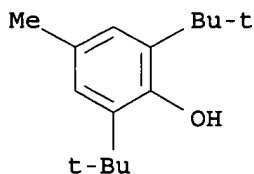


RN 110-17-8 HCAPLUS
 CN 2-Butenedioic acid (2E) - (9CI) (CA INDEX NAME)

Double bond geometry as shown.

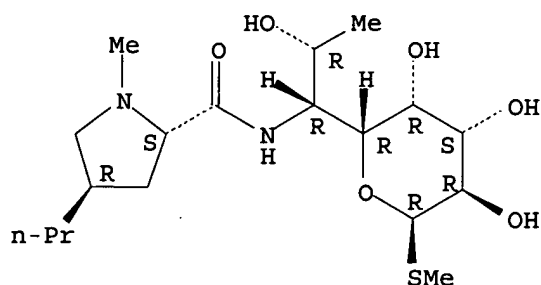


RN 128-37-0 HCAPLUS
 CN Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (9CI) (CA INDEX NAME)

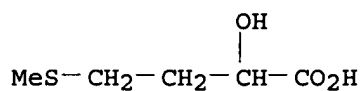


RN 154-21-2 HCAPLUS
 CN D-erythro- α -D-galacto-Octopyranoside, methyl 6,8-dideoxy-6-
 [[[(2S,4R) -1-methyl-4-propyl-2-pyrrolidinyl]carbonyl]amino]-1-thio- (9CI)
 (CA INDEX NAME)

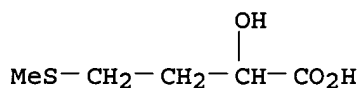
Absolute stereochemistry.



RN 583-91-5 HCAPLUS
 CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



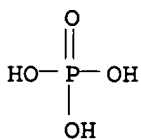
RN 583-91-5 HCAPLUS
 CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



RN 1405-87-4 HCAPLUS
 CN Bacitracin (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 7664-38-2 HCAPLUS
 CN Phosphoric acid (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7732-18-5 HCAPLUS
 CN Water (8CI, 9CI) (CA INDEX NAME)

H₂O

RN 9000-01-5 HCAPLUS
 CN Gum arabic (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9000-07-1 HCAPLUS
 CN Carrageenan (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9000-28-6 HCAPLUS
CN Gum ghatti (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9000-30-0 HCAPLUS
CN Guar gum (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9000-40-2 HCAPLUS
CN Carob gum (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9000-65-1 HCAPLUS
CN Gum tragacanth (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9000-69-5 HCAPLUS
CN Pectin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9000-92-4 HCAPLUS
CN Amylase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9001-42-7 HCAPLUS
CN Glucosidase, α - (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9001-62-1 HCAPLUS
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9001-75-6 HCAPLUS
CN Pepsin A (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9002-07-7 HCAPLUS
CN Trypsin (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9002-18-0 HCAPLUS
CN Agar (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9002-72-6 HCAPLUS
CN Somatotropin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9002-76-0 HCAPLUS
CN Gastrin (hormone) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9004-10-8 HCAPLUS
CN Insulin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9005-25-8 HCAPLUS
CN Starch (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9005-38-3 HCAPLUS

CN Alginic acid, sodium salt (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9007-12-9 HCAPLUS

CN Calcitonin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9007-92-5 HCAPLUS

CN Glucagon (7CI, 8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9061-61-4 HCAPLUS

CN Nerve growth factor (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 11006-76-1 HCAPLUS

CN Virginiamycin (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

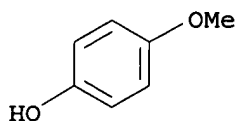
RN 11096-26-7 HCAPLUS

CN Erythropoietin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 25013-16-5 HCAPLUS

CN Phenol, (1,1-dimethylethyl)-4-methoxy- (9CI) (CA INDEX NAME)



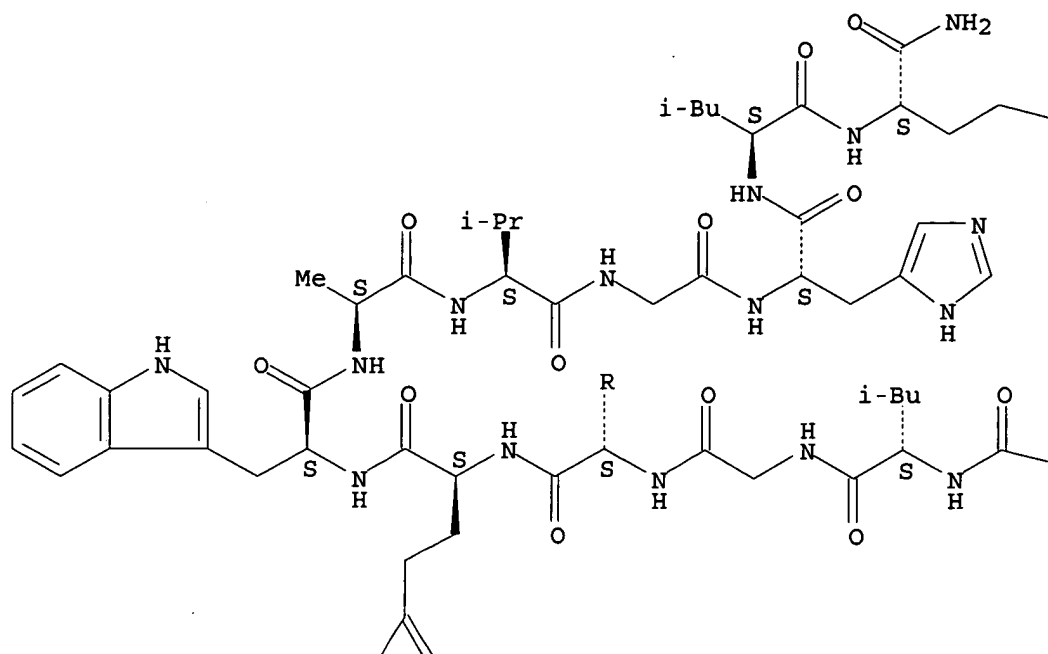
D1-Bu-t

RN 31362-50-2 HCAPLUS

CN Bombesin (9CI) (CA INDEX NAME)

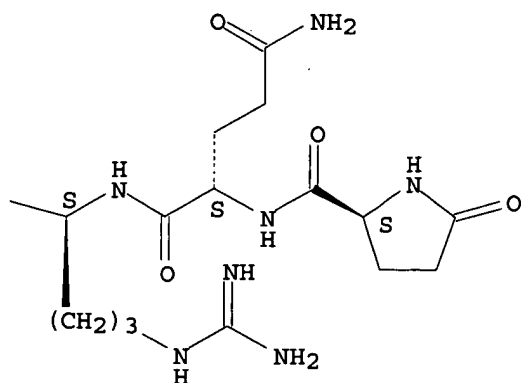
Absolute stereochemistry.

PAGE 1-A

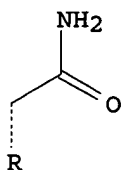
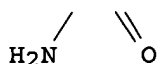


PAGE 1-B

SMe



PAGE 2-A



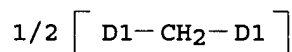
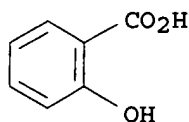
RN 37341-53-0 HCAPLUS
 CN Keratinase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 55852-84-1 HCAPLUS
 CN Bacitracin, methylenebis[2-hydroxybenzoate] (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 27496-82-8
 CMF C15 H12 O6
 CCI IDS



CM 2

CRN 1405-87-4
 CMF Unspecified
 CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 61912-98-9 HCAPLUS
 CN Insulin-like growth factor (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 62031-54-3 HCAPLUS
 CN Fibroblast growth factor (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 62229-50-9 HCAPLUS
 CN Epidermal growth factor (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 83869-56-1 HCAPLUS
 CN Colony-stimulating factor 2 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 127464-60-2 HCAPLUS
 CN Vascular endothelial growth factor (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 148348-15-6 HCAPLUS
 CN Fibroblast growth factor 7 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 16 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:262168 HCAPLUS

DOCUMENT NUMBER: 130:316625

TITLE: Delayed total release **gastrointestinal** drug
 delivery system

INVENTOR(S): Lerner, E. Itzhak; Flashner, Moshe; Penhasi, Adel

PATENT ASSIGNEE(S): Perio Products Ltd., Israel

SOURCE: PCT Int. Appl., 70 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

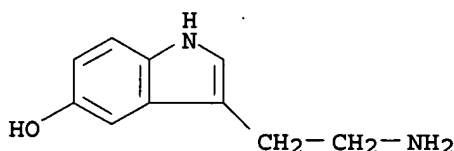
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9918938	A1	19990422	WO 1998-US20779	19981001
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2305762	AA	19990422	CA 1998-2305762	19981001
AU 9896001	A1	19990503	AU 1998-96001	19981001
AU 740757	B2	20011115		
EP 1021171	A1	20000726	EP 1998-949742	19981001
EP 1021171	B1	20030502		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
TR 200000944	T2	20001121	TR 2000-200000944	19981001
JP 2001519379	T2	20011023	JP 2000-515574	19981001
BR 9815240	A	20011030	BR 1998-15240	19981001
AT 238774	E	20030515	AT 1998-949742	19981001
PT 1021171	T	20031031	PT 1998-949742	19981001
RU 2222815	C2	20040127	RU 2000-112009	19981001
ES 2198756	T3	20040201	ES 1998-949742	19981001
NZ 503820	A	20040227	NZ 1998-503820	19981001
NO 2000001829	A	20000607	NO 2000-1829	20000407
US 6531152	B1	20030311	US 2000-694314	20001024
PRIORITY APPLN. INFO.:			US 1997-948235	A2 19971009
			US 1998-163202	A 19980930
			WO 1998-US20779	W 19981001

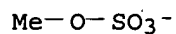
- AB A **gastrointestinal** delivery system is provided. The system comprises a drug in combination with a swellable core material, the core being surrounded by a water-insol. or relatively water-insol. coating material in which particulate water-insol. material is embedded. When the delivery device enters the **gastrointestinal** tract, the particulate matter takes up liquid, thus forming channels interconnecting the drug-containing core with the outside of the delivery device. Through these channels liquid enters the core which then swells to the point at which the coating is broken. When the integrity of the coating is destroyed, the core then disintegrates immediately releasing all or most of the drug at a specific site. By controlling parameters in the device, such as the core material, carrier material in the coating, and particulate matter, the location of release of the drug can be carefully controlled. Thus, the invention is also directed to a method of using the device for the treatment of disease by the release of drugs in the **gastrointestinal** tract in a location- and time-dependent manner. A tablet core was formulated containing Ca pectinate 59, Emcocel 20, PVP 10, diclofenac Na 10, and Mg stearate 1 % and sprayed with Et cellulose/Ca pectinate (1:1). An 8 mg coating per tablet gave a delay of 2 h; 11 mg gave a delay of 4 h; 17 mg a delay of 9 h; 20 mg gave a delay of 12 h; in each case the tablets fully disintegrated after the delay time.
- IT 50-67-9, biological studies 51-60-5, Neostigmine methylsulfate 57-47-6, Physostigmine 57-64-7, Physostigmine salicylate 59-99-4, Neostigmine 64-47-1, Physostigmine sulfate 79-10-7D, Acrylic acid, esters, polymers 79-41-4D, Methacrylic acid, esters, polymers 101-26-8, Pyridostigmine bromide 114-80-7, Neostigmine bromide 1490-04-6, Menthol 5104-49-4, Flurbiprofen 9000-07-1D, Carrageenan, salts 9000-30-0D, Guar gum, salts 9000-40-2D, Locust bean gum, salts 9000-65-1D, Tragacanth gum, salts 9000-69-5D, Pectin, salts 9003-01-4, Polyacrylic acid 9003-39-8, Crospovidone 9004-32-4 9004-34-6, Cellulose, biological studies 9004-57-3, Ethyl cellulose 9004-62-0, Hydroxyethyl cellulose 9004-64-2, Hydroxypropyl cellulose 9004-67-5, Methyl cellulose 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid 9005-35-0, Calcium alginate 9019-40-3, Aluminum alginate 9019-45-8, Ferric alginate 9019-49-2, Zinc alginate 10238-21-8, Glibenclamide 11138-66-2D, Xanthan gum, salts 15307-79-6, Sodium diclofenac 15307-86-5, Diclofenac 38194-50-2, Sulindac 39301-46-7, Calcium pectinate 65546-96-5, Aluminum pectinate 65546-98-7, Zinc pectinate 66960-34-7, Metkephamid 81296-72-2, Ferric pectinate 96351-87-0, Ferrous alginate 101525-98-8 223532-50-1, Ferrous pectinate
- RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(coatings containing water-insol. particulates for delayed total release **gastrointestinal** drug delivery system)
- RN 50-67-9 HCAPLUS
- CN 1H-Indol-5-ol, 3-(2-aminoethyl)- (9CI) (CA INDEX NAME)



RN 51-60-5 HCAPLUS
 CN Benzenaminium, 3-[[[(dimethylamino)carbonyl]oxy]-N,N,N-trimethyl-, methyl sulfate (9CI) (CA INDEX NAME)

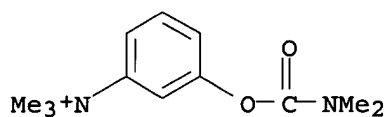
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CRN 21228-90-0
 CMF C H3 O4 S



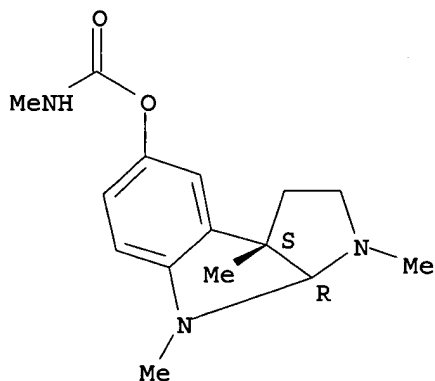
CM 2

CRN 59-99-4
 CMF C12 H19 N2 O2



RN 57-47-6 HCAPLUS
 CN Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS,8aR)- (9CI) (CA INDEX NAME)

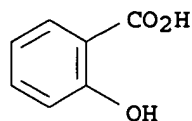
Absolute stereochemistry. Rotation (-).



RN 57-64-7 HCAPLUS
 CN Benzoic acid, 2-hydroxy-, compd. with (3aS,8aR)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo[2,3-b]indol-5-yl methylcarbamate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 69-72-7
 CMF C7 H6 O3

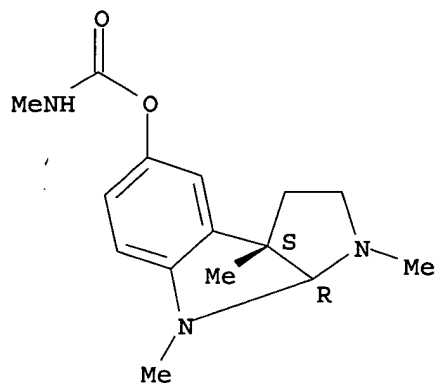


CM 2

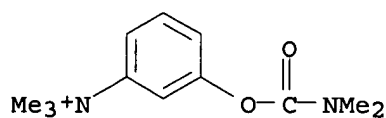
CRN 57-47-6

CMF C15 H21 N3 O2

Absolute stereochemistry. Rotation (-).



RN 59-99-4 HCAPLUS

CN Benzenaminium, 3-[[dimethylamino]carbonyloxy]-N,N,N-trimethyl- (9CI)
(CA INDEX NAME)

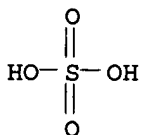
RN 64-47-1 HCAPLUS

CN Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-,
methylcarbamate (ester), (3aS,8aR)-, sulfate (2:1) (salt) (9CI) (CA INDEX
NAME)

CM 1

CRN 7664-93-9

CMF H2 O4 S

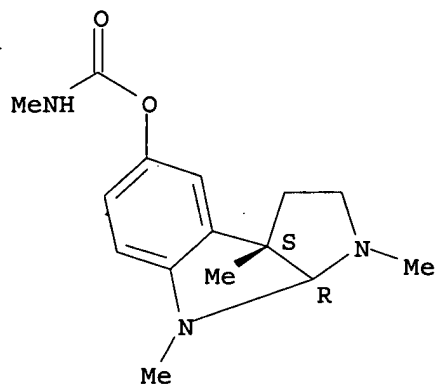


CM 2

CRN 57-47-6

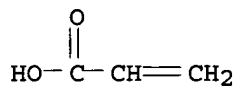
CMF C15 H21 N3 O2

Absolute stereochemistry. Rotation (-).



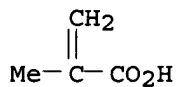
RN 79-10-7 HCAPLUS

CN 2-Propenoic acid (9CI) (CA INDEX NAME)



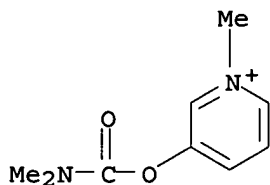
RN 79-41-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl- (9CI) (CA INDEX NAME)



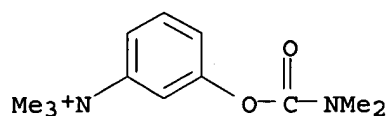
RN 101-26-8 HCAPLUS

CN Pyridinium, 3-[[dimethylamino]carbonyloxy]-1-methyl-, bromide (9CI) (CA INDEX NAME)

● Br⁻

RN 114-80-7 HCAPLUS

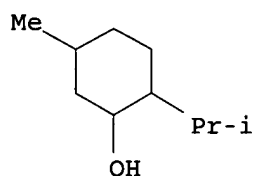
CN Benzenaminium, 3-[[[(dimethylamino)carbonyl]oxy]-N,N,N-trimethyl-, bromide
(9CI) (CA INDEX NAME)



● Br⁻

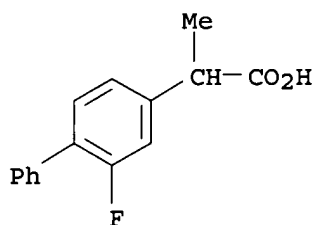
RN 1490-04-6 HCAPLUS

CN Cyclohexanol, 5-methyl-2-(1-methylethyl)- (9CI) (CA INDEX NAME)



RN 5104-49-4 HCAPLUS

CN [1,1'-Biphenyl]-4-acetic acid, 2-fluoro- α -methyl- (9CI) (CA INDEX NAME)



RN 9000-07-1 HCAPLUS

CN Carrageenan (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9000-30-0 HCAPLUS

CN Guar gum (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9000-40-2 HCAPLUS

CN Carob gum (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9000-65-1 HCAPLUS

CN Gum tragacanth (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9000-69-5 HCAPLUS

CN Pectin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

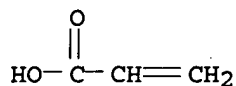
RN 9003-01-4 HCAPLUS

CN 2-Propenoic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7

CMF C3 H4 O2



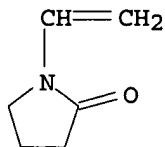
RN 9003-39-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0

CMF C6 H9 N O



RN 9004-32-4 HCAPLUS

CN Cellulose, carboxymethyl ether, sodium salt (8CI, 9CI) (CA INDEX NAME)

CM 1

CRN 9004-34-6

CMF Unspecified

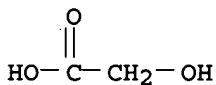
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 79-14-1

CMF C2 H4 O3



RN 9004-34-6 HCAPLUS

CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9004-57-3 HCAPLUS

CN Cellulose, ethyl ether (8CI, 9CI) (CA INDEX NAME)

CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 64-17-5
CMF C2 H6 O

$\text{H}_3\text{C}-\text{CH}_2-\text{OH}$

RN 9004-62-0 HCAPLUS
CN Cellulose, 2-hydroxyethyl ether (8CI, 9CI) (CA INDEX NAME)

CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 107-21-1
CMF C2 H6 O2

$\text{HO}-\text{CH}_2-\text{CH}_2-\text{OH}$

RN 9004-64-2 HCAPLUS
CN Cellulose, 2-hydroxypropyl ether (9CI) (CA INDEX NAME)

CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 57-55-6
CMF C3 H8 O2

$\begin{array}{c} \text{OH} \\ | \\ \text{H}_3\text{C}-\text{CH}-\text{CH}_2-\text{OH} \end{array}$

RN 9004-67-5 HCAPLUS
 CN Cellulose, methyl ether (8CI, 9CI) (CA INDEX NAME)

CM 1

CRN 9004-34-6
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 67-56-1
 CMF C H4 O

H₃C—OH

RN 9005-25-8 HCAPLUS
 CN Starch (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9005-32-7 HCAPLUS
 CN Alginic acid (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9005-35-0 HCAPLUS
 CN Alginic acid, calcium salt (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9019-40-3 HCAPLUS
 CN Alginic acid, aluminum salt (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

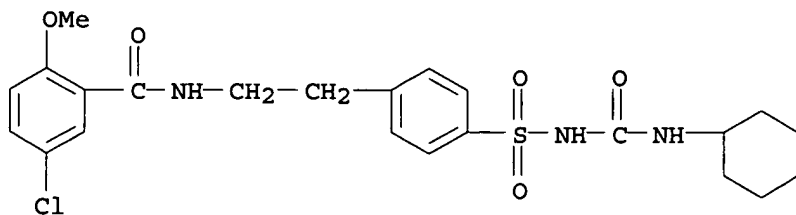
RN 9019-45-8 HCAPLUS
 CN Alginic acid, iron(3+) salt (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9019-49-2 HCAPLUS
 CN Alginic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 10238-21-8 HCAPLUS
 CN Benzamide, 5-chloro-N-[2-[4-[[[(cyclohexylamino)carbonyl]amino]sulfonyl]phenyl]ethyl]-2-methoxy- (9CI) (CA INDEX NAME)



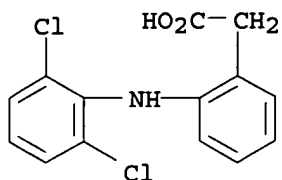
RN 11138-66-2 HCAPLUS

CN Xanthan gum (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 15307-79-6 HCAPLUS

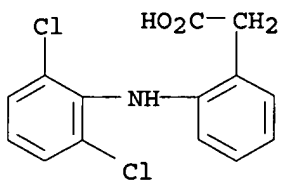
CN Benzeneacetic acid, 2-[(2,6-dichlorophenyl)amino]-, monosodium salt (9CI)
(CA INDEX NAME)



● Na

RN 15307-86-5 HCAPLUS

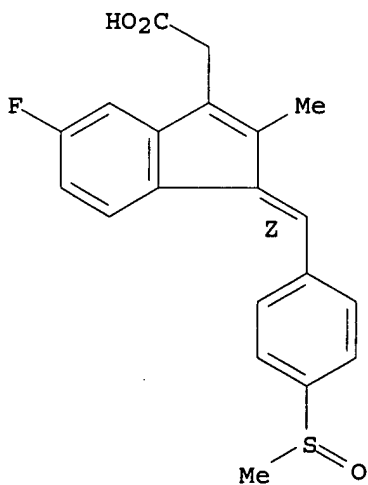
CN Benzeneacetic acid, 2-[(2,6-dichlorophenyl)amino]- (9CI) (CA INDEX NAME)



RN 38194-50-2 HCAPLUS

CN 1H-Indene-3-acetic acid, 5-fluoro-2-methyl-1-[[4-(methylsulfinyl)phenyl]methylene]-, (1Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 39301-46-7 HCAPLUS

CN Pectin, calcium salt (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 65546-96-5 HCAPLUS

CN Pectin, aluminum salt (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 65546-98-7 HCAPLUS

CN Pectin, zinc salt (9CI) (CA INDEX NAME)

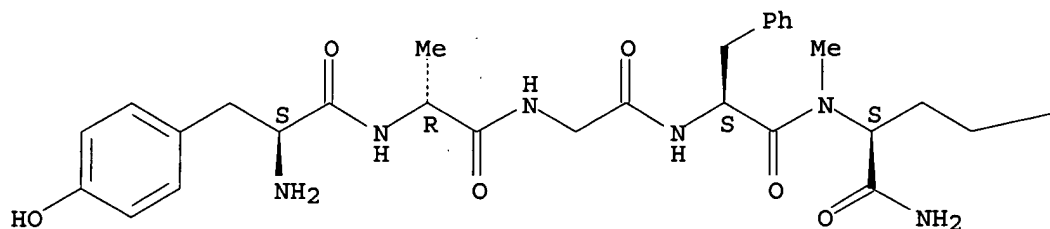
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 66960-34-7 HCAPLUS

CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

—SMe

RN 81296-72-2 HCAPLUS

CN Pectin, iron(3+) salt (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 96351-87-0 HCAPLUS

CN Alginic acid, iron(2+) salt (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

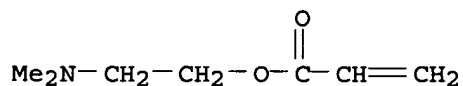
RN 101525-98-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with
2-(dimethylamino)ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 2439-35-2

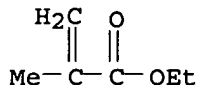
CMF C7 H13 N O2



CM 2

CRN 97-63-2

CMF C6 H10 O2



RN 223532-50-1 HCAPLUS

CN Pectin, iron(2+) salt (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 9000-81-1, Acetylcholinesterase

RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (inhibitors; coatings containing water-insol. particulates for delayed
 total release gastrointestinal drug delivery system)

RN 9000-81-1 HCAPLUS

CN Esterase, acetyl choline (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 17 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:249071 HCAPLUS

DOCUMENT NUMBER: 130:262147

TITLE: Use of D-methionine or other
 methionine compound to reduce the toxicity of
 ototoxic drugs, noise, and radiation

INVENTOR(S): Campbell, Kathleen C. M.

PATENT ASSIGNEE(S): Southern Illinois University, USA

SOURCE: PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9917765	A1	19990415	WO 1998-US6960	19980408
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6187817	B1	20010213	US 1997-942845	19971002
CA 2303901	AA	19990415	CA 1998-2303901	19980408
AU 9869568	A1	19990427	AU 1998-69568	19980408
AU 753039	B2	20021003		
EP 1019036	A1	20000719	EP 1998-915362	19980408
EP 1019036	B1	20030625		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

JP 2001518499	T2	20011016	JP 2000-514636	19980408
AT 243511	E	20030715	AT 1998-915362	19980408
PT 1019036	T	20031128	PT 1998-915362	19980408
ES 2202834	T3	20040401	ES 1998-915362	19980408
PRIORITY APPLN. INFO.:			US 1997-942845	A 19971002
			US 1996-27750P	P 19961003
			WO 1998-US6960	W 19980408

OTHER SOURCE(S): MARPAT 130:262147

AB Methods of preventing or reducing hearing or balance loss, damage to ear cells, weight loss, **gastrointestinal** toxicity, **neurotoxicity**, **alopecia**, and prolonging survival in patients undergoing treatment with therapeutically effective amts. of platinum-containing chemotherapeutic agents, e.g. cisplatin, are provided. Methods are also provided for preventing or reducing such symptoms in patients undergoing treatment with loop diuretics, aminoglycoside antibiotics, iron chelating agents, quinine, and quinidine, or those who have been exposed to toxic levels of noise or radiation. These methods comprise administering an effective amount of a **methionine** protective agent, e.g. D-**methionine**, prior to, simultaneously with, or subsequently to administration of the platinum-containing chemotherapeutic agent, loop diuretic agent, etc., or **exposure** to noise or **radiation**. Combinations of these time periods can also be employed.

IT 7439-89-6, Iron, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study) (chelating agents; **methionine** compds. to reduce toxicity of **ototoxic** drugs, noise, and radiation)

RN 7439-89-6 HCAPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

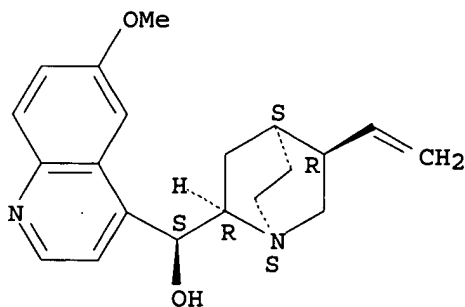
IT 56-54-2, Quinidine 130-95-0, Quinine 15663-27-1, Cisplatin

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (**methionine** compds. to reduce toxicity of **ototoxic** drugs, noise, and radiation)

RN 56-54-2 HCAPLUS

CN Cinchonan-9-ol, 6'-methoxy-, (9S)- (9CI) (CA INDEX NAME)

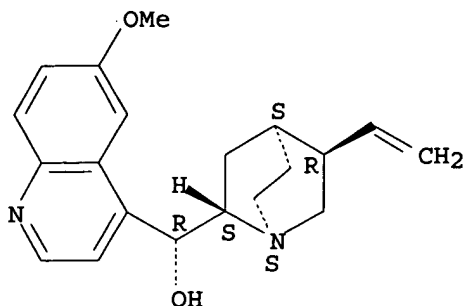
Absolute stereochemistry. Rotation (+).



RN 130-95-0 HCAPLUS

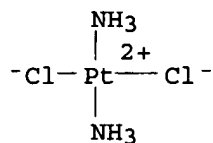
CN Cinchonan-9-ol, 6'-methoxy-, (8 α ,9R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 15663-27-1 HCAPLUS

CN Platinum, diamminedichloro-, (SP-4-2)- (9CI) (CA INDEX NAME)



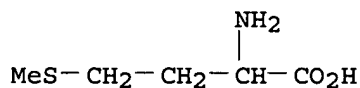
IT 59-51-8, Methionine 59-51-8D,
Methionine, compds. 63-68-3, L-Methionine,
biological studies 63-68-3D, L-Methionine, derivs.,
biological studies 348-67-4, D-Methionine
348-67-4D, D-Methionine, derivs. 502-83-0,
Methioninol 1319-79-5 13073-35-3, Ethionine
29908-03-0, S-Adenosyl-L-methionine

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(methionine compds. to reduce toxicity of ototoxic drugs, noise, and radiation)

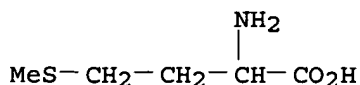
RN 59-51-8 HCAPLUS

CN Methionine (9CI) (CA INDEX NAME)



RN 59-51-8 HCAPLUS

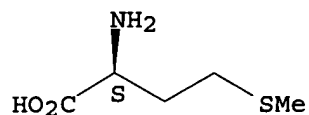
CN Methionine (9CI) (CA INDEX NAME)



RN 63-68-3 HCAPLUS

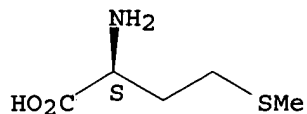
CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



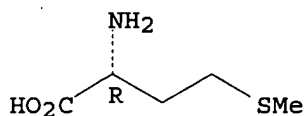
RN 63-68-3 HCAPLUS
CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



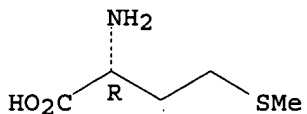
RN 348-67-4 HCAPLUS
CN D-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

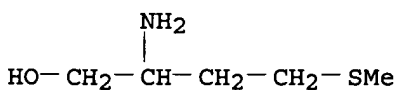


RN 348-67-4 HCAPLUS
CN D-Methionine (9CI) (CA INDEX NAME)

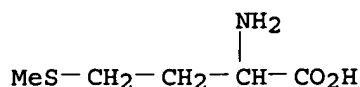
Absolute stereochemistry. Rotation (+).



RN 502-83-0 HCAPLUS
CN 1-Butanol, 2-amino-4-(methylthio)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 1319-79-5 HCAPLUS
CN L-Methionine, hydroxy- (9CI) (CA INDEX NAME)

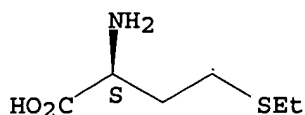


D1-OH

RN 13073-35-3 HCAPLUS

CN L-Homocysteine, S-ethyl- (9CI) (CA INDEX NAME)

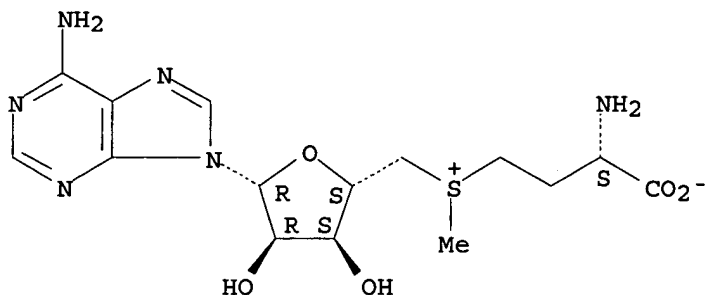
Absolute stereochemistry.



RN 29908-03-0 HCAPLUS

CN Adenosine, 5'-[[(3S)-3-amino-3-carboxypropyl]methylsulfonio]-5'-deoxy-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 18 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:181239 HCAPLUS

DOCUMENT NUMBER: 130:311088

TITLE: Ruminal escape, **gastrointestinal** absorption, and response of serum methionine to supplementation of liquid methionine hydroxy analog in dairy cows

AUTHOR(S): Koenig, K. M.; Rode, L. M.; Knight, C. D.; McCullough, P. R.

CORPORATE SOURCE: Lethbridge Research Centre, Agriculture and Agri-Food Canada, Lethbridge, AB, T1J 4B1, Can.

SOURCE: Journal of Dairy Science (1999), 82(2), 355-361

CODEN: JDSCAE; ISSN: 0022-0302

PUBLISHER: American Dairy Science Association

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The bioavailability of liquid methionine hydroxy analog D,L-2-hydroxy-4-(methylthio)butanoic acid (Alimet) was evaluated in 2 expts. with 4

cannulated lactating dairy cows. In the first experiment each cow was given a daily intraruminal pulse dose of 0, 30, 60, or 90 g methionine analog for 10 days. Duodenal samples were collected at 16, 20, and 24 h after dosing for the last 5 days and pooled. The methionine analog was not detected in the duodenal content because it passed rapidly from the rumen relative to the sampling protocol. In the second experiment the cows were offered 90 g methionine analog and 600 mL Cr-EDTA solution (3.5 g Cr) mixed with ground corn for 20 min, after which any remains of the dose were placed directly into the rumen. The concns. of the analog peaked in the ruminal and duodenal fluid at 1 and 3 h, resp. The fractional rate consts. for ruminal and duodenal disappearance of the methionine analog and passage of the liquid suggest that $50.0 \pm 2.8\%$ of the analog escaped ruminal degradation and became available for intestinal absorption ($44.6 \pm 5.7\%$) or was absorbed from the omasum ($5.4 \pm 3.3\%$). Blood serum methionine concns. peaked 6 h after analog dosing at a level that was 3-times the predose level, indicating that methionine analog that escaped ruminal degradation was absorbed and metabolized to methionine.

IT 63-68-3, L-Methionine, biological studies

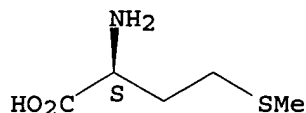
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(methionine hydroxy analog ruminal escape, **gastrointestinal** absorption and blood serum methionine levels in dairy cows)

RN 63-68-3 HCAPLUS

CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



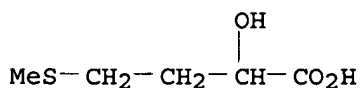
IT 583-91-5, Alimet

RL: BPR (Biological process); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); PROC (Process); USES (Uses)

(methionine hydroxy analog ruminal escape, **gastrointestinal** absorption and blood serum methionine levels in dairy cows)

RN 583-91-5 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 19 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:695293 HCAPLUS

DOCUMENT NUMBER: 130:78092

TITLE: Tumor cell spheroids as a model for evaluation of metabolic changes after irradiation

AUTHOR(S): Senekowitsch-Schmidtke, Reingard; Matzen, Klaus; Truckenbrodt, Regine; Mattes, Johannes; Heiss, Peter; Schwaiger, Markus

CORPORATE SOURCE: Nuklearmedizinische Klinik und Poliklinik, Technische Universität München, Munich, 81675, Germany

SOURCE: Journal of Nuclear Medicine (1998), 39(10), 1762-1768
CODEN: JNMEAQ; ISSN: 0161-5505
PUBLISHER: Society of Nuclear Medicine, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Tumor cell spheroids provide a good model to evaluate the relationship between tumor volume and the number of viable cells in the volume with the uptake

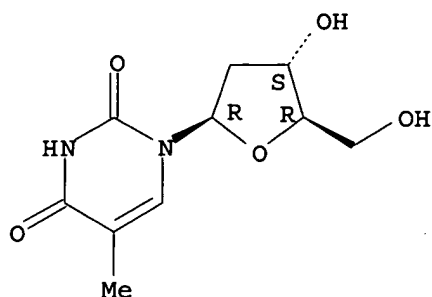
of metabolic tracers before and after therapy. They represent the only in vitro model that allows the determination of the activity per unit volume, a parameter which is relevant for interpretation of PET studies. The purpose of this study was to evaluate this model with respect to the uptake of ¹⁴C-FDG, ³H-methionine and ³H-thymidine with and without exposure to irradiation. Spheroids of the human adenocarcinoma cell line SW 707 were incubated in media containing ¹⁴C-FDG, ³H-methionine or ³H-thymidine for 1 h at 1, 4, 8, 24 and 48 h after exposure to a single radiation dose of 6 Gy together with control spheroids. Tracer uptake after incubation was expressed in cpm/spheroid, cpm/1000 viable cells and cpm/0.01 mm³. In addition, the proliferative capacity of control and irradiated spheroids was determined using the clonogenic assay. Spheroid uptake of FDG decreased with time after irradiation, while the uptake per 1000 viable cells was increased significantly. The activity per unit volume remained unchanged in comparison to control spheroids. Methionine uptake per spheroid was unchanged after irradiation because of the high increase in uptake per 1000 viable cells. Uptake per unit volume also remained unchanged in comparison to controls. Thymidine uptake per 1000 viable cells did not change after irradiation but showed significant differences in uptake per spheroid and per unit volume compared to controls. The percentage of thymidine incorporated into the TCA-precipitable fraction containing DNA was 50% in controls and decreased to 12% at 24 h after irradiation. The suppressed clonogenic capacity early after therapy recovered with the increase in thymidine uptake and with the increase in thymidine incorporation into DNA. The results show that the activity determined within a certain tumor volume is a balance between the increased tracer uptake by surviving cells after therapy and the lack of tracer uptake by dead cells, which still contribute to the tumor volume. Thus, the resulting unchanged activity per unit volume within the spheroid, as found for FDG and methionine, may not fully reflect therapy-induced metabolic changes in tumors.

IT 50-89-5, Thymidine, biological studies 63-68-3, Methionine, biological studies 29702-43-0
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(tumor cell spheroids as a model for evaluation of metabolic changes after irradiation)

RN 50-89-5 HCAPLUS

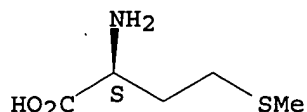
CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



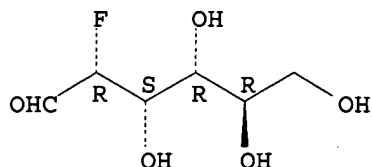
RN 63-68-3 HCAPLUS
CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 29702-43-0 HCAPLUS
CN D-Glucose, 2-deoxy-2-fluoro- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 20 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:177782 HCAPLUS

DOCUMENT NUMBER: 128:269942

TITLE: The relative effectiveness of 2-hydroxy-4-(methylthio)butanoic acid and DL-methionine in young swine

AUTHOR(S): Knight, C. D.; Atwell, C. A.; Wuelling, C. W.; Ivey, F. J.; Dibner, J. J.

CORPORATE SOURCE: Novus International, Inc., St. Charles, MO, 63304, USA

SOURCE: Journal of Animal Science (1998), 76(3), 781-787

CODEN: JANSAG; ISSN: 0021-8812

PUBLISHER: American Society of Animal Science

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We compared the nutritional effectiveness of 2-hydroxy-4-(methylthio)butanoic acid (HMB) and DL-methionine (DLM) as sources of L-methionine in methionine-deficient primary cultures of pig liver cells and methionine-deficient early-weaned pigs. Viable hepatocytes were obtained from minced pig liver and maintained in a high d.,

differentiated, non-proliferation cell culture system. The culture medium was supplemented with HMB, DLM, or L-methionine, and the cells were pulse-dosed with L-[U-14C]leucine for 24 h to determine the level of protein synthesis. Leucine incorporation per mg of protein indicated a 6-8-fold increase in protein synthesis with methionine levels 5-10 μ M, regardless of the source of methionine. Two 24-pen replicate methionine dose titrns. were conducted with 95 early-weaned com. crossbred piglets. The pelleted corn, dried whey, and porcine blood plasma basal diet contained 1.5% lysine, 0.23% methionine, and 0.48% cystine, and was supplemented with 0, 0.05, or 0.10% methionine activity as DLM or HMB for 21 d. There was a 134, 104, and 61% increase in the cumulative average daily gain for each successive week of the study with a 30 and 19% improvement in the feed/gain ratio after 7 and 14 d. The growth performance due to the source of methionine did not differ and the slope ratio potency detns. (gain vs. intake of methionine source) of HMB vs. DLM indicated a 119, 111, and 95% relative activity for cumulative weekly performance. Thus, HMB and DLM may provide equimolar levels of methionine activity in swine.

IT 63-68-3, L-Methionine, biological studies

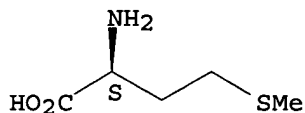
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(DL-methionine and 2-hydroxy-4-(methylthio)butanoic acid nutritional effectiveness in piglets)

RN 63-68-3 HCAPLUS

CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



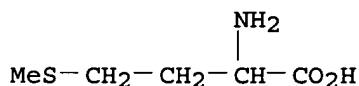
IT 59-51-8, Methionine 583-91-5, Alimet

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(DL-methionine and 2-hydroxy-4-(methylthio)butanoic acid nutritional effectiveness in piglets)

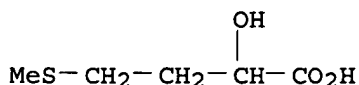
RN 59-51-8 HCAPLUS

CN Methionine (9CI) (CA INDEX NAME)



RN 583-91-5 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 21 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:47510 HCAPLUS

DOCUMENT NUMBER: 128:227677
 TITLE: Identification and stereospecificity of the first three enzymes of 3-dimethylsulfoniopropionate biosynthesis in a chlorophyte alga
 AUTHOR(S): Summers, Peter S.; Nolte, Kurt D.; Cooper, Arthur J. L.; Borgeas, Heidi; Leustek, Thomas; Rhodes, David; Hanson, Andrew D.
 CORPORATE SOURCE: Horticultural Sciences Department, University of Florida, Gainesville, FL, 32611, USA
 SOURCE: Plant Physiology (1998), 116(1), 369-378
 CODEN: PLPHAY; ISSN: 0032-0889
 PUBLISHER: American Society of Plant Physiologists
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Many marine algae produce 3-dimethylsulfoniopropionate (DMSP), a potent osmoprotective compound whose degradation product dimethylsulfide plays a central role in the biogeochem. S cycle. Algae are known to synthesize DMSP via the four-step pathway, L-Met → 4-methylthio-2-oxobutyrate → 4-methylthio-2-hydroxybutyrate → 4-dimethylsulfonio-2-hydroxybutyrate (DMSHB) → DMSP. Substrate-specific enzymes catalyzing the first three steps in this pathway were detected and partially characterized in cell-free exts. of the chlorophyte alga *Enteromorpha intestinalis*. The first is a 2-oxoglutarate-dependent aminotransferase, the second an NADPH-linked reductase, and the third an S-adenosylmethionine-dependent methyltransferase. Sensitive radiometric assays were developed for these enzymes, and used to show that their activities are high enough to account for the estimated in vivo flux from Met to DMSP. The activities of these enzymes in other DMSP-rich chlorophyte algae were at least as high as those in *E. intestinalis*, but were ≥20-fold lower in algae without DMSP. The reductase and methyl-transferase were specific for the D-enantiomer of 4-methylthio-2-hydroxybutyrate in vitro, and both the methyltransferase step and the step(s) converting DMSHB to DMSP were shown to prefer D-enantiomers in vivo. The intermediate DMSHB was shown to act as an osmoprotectant, which indicates that the first three steps of the DMSP synthesis pathway may be sufficient to confer **osmotolerance**.

IT 82657-90-7, Methionine aminotransferase 204655-74-3, NADPH-linked 4-methylthio-2-oxobutyrate reductase 204655-78-7, D-Methylthio-2-hydroxybutyrate S-methyltransferase
 RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (identification and stereospecificity of first three enzymes of 3-dimethylsulfoniopropionate biosynthesis in a chlorophyte alga)

RN 82657-90-7 HCAPLUS
 CN Aminotransferase, L-methionine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 RN 204655-74-3 HCAPLUS
 CN Reductase, 4-methylthio-2-oxobutyrate (reduced nicotinamide adenine dinucleotide phosphate) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 RN 204655-78-7 HCAPLUS
 CN Methyltransferase, D-methylthio-2-hydroxybutyrate S- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 IT 63-68-3, L-Methionine, biological studies 24787-94-8
 39638-34-1 48042-96-2 204575-39-3

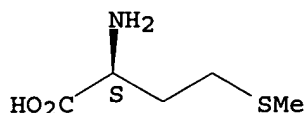
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(identification and stereospecificity of first three enzymes of 3-dimethylsulfoniopropionate biosynthesis in a chlorophyte alga)

RN 63-68-3 HCAPLUS

CN L-Methionine (9CI) (CA INDEX NAME)

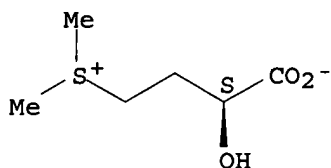
Absolute stereochemistry.



RN 24787-94-8 HCAPLUS

CN Sulfonium, (3-carboxy-3-hydroxypropyl)dimethyl-, inner salt, (S)- (9CI)
(CA INDEX NAME)

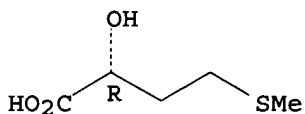
Absolute stereochemistry.



RN 39638-34-1 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)-, (2R)- (9CI) (CA INDEX NAME)

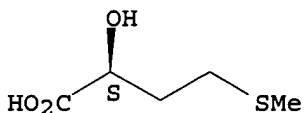
Absolute stereochemistry.



RN 48042-96-2 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)-, (2S)- (9CI) (CA INDEX NAME)

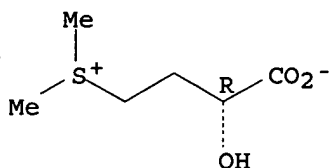
Absolute stereochemistry.



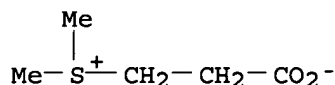
RN 204575-39-3 HCAPLUS

CN Sulfonium, (3-carboxy-3-hydroxypropyl)dimethyl-, inner salt, (R)- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.



IT 7314-30-9, 3-Dimethylsulfoniopropionate
 RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL
 (Biological study); FORM (Formation, nonpreparative)
 (identification and stereospecificity of first three enzymes of
 3-dimethylsulfoniopropionate biosynthesis in a chlorophyte alga)
 RN 7314-30-9 HCAPLUS
 CN Sulfonium, (2-carboxyethyl)dimethyl-, inner salt (9CI) (CA INDEX NAME)



REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 22 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:138221 HCAPLUS

DOCUMENT NUMBER: 126:242711

TITLE: The challenge of proteolytic enzymes in intestinal
 peptide delivery

AUTHOR(S): Langguth, P.; Bohner, V.; Heizmann, J.; Merkle, H. P.;
 Wolfram, S.; Amidon, G. L.; Yamashita, S.

CORPORATE SOURCE: Department of Pharmacy, ETH Zurich,
 Winterthurerstrasse 190, Zurich, CH-8057, Switz.

SOURCE: Journal of Controlled Release (1997), 46(1,2), 39-57
 CODEN: JCREEC; ISSN: 0168-3659

PUBLISHER: Elsevier

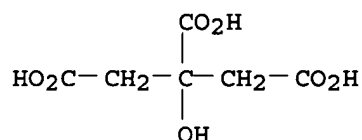
DOCUMENT TYPE: Journal

LANGUAGE: English

AB The former general belief that all peptides and proteins are entirely
 decomposed in the **gastrointestinal** tract before absorption occurs
 turns out to be a misconception. Today several lines of evidence suggest
 that some proteins and peptides are capable of traversing the intestinal
 epithelium in intact form, however with yet unpredictable and often
 insufficient bioavailability, due to severe presystemic degradation in the
gastrointestinal tract. Initial steps in the development of drug
 delivery systems for peroral peptide and protein administration involve
 systematic case by case investigations on proteolytic degradation mechanisms
 and kinetics as well as segmental differences in degradation rate and
 intestinal permeability using a variety of techniques such as incubations
 with pancreatic enzymes, mucosal homogenates, brush-border membrane
 vesicles, intestinal rings and perfusion expts. LHRH agonists, e.g.
 buserelin and immunoactive thymopoietin fragments are examples of compds.
 readily degraded by pancreatic trypsin, chymotrypsin and carboxypeptidases
 whereas metkephamid, a pentapeptide has been shown to completely resist
 proteases of pancreatic origin. Investigations on brush-border
 membrane-catalyzed degradation of several enkephalin analogs demonstrate the
 versatility of the enzyme systems involved in the degradation and also the
 saturability of the reaction rate. The latter findings imply that at

higher peptide doses (concns.) the fraction absorbed can be expected to increase due to a saturability of the degradation process. For proteolytically labile compds., appropriate means to stabilize the mol. within the **gastrointestinal** tract are mandatory in order to improve the fraction absorbed unchanged. These may involve a stabilization of the mol. itself, e.g. by inserting unnatural D-amino acids into the mol., N-methylation of peptide bonds or cyclization, examples of which are presented. On the other hand, coadministration of protease inhibitors may significantly enhance the bioavailability of a proteolytically labile peptide. A delivery system is presented which simultaneously releases a peptide together with an aminopeptidase inhibitor and a pH-modifier in the lower **gastrointestinal** tract, resulting in an improvement in absolute bioavailability from 0.2% to 4%.

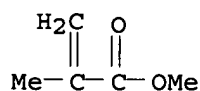
IT 77-92-9, Citric acid, biological studies
 RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (buffer; proteolytic enzymes in intestinal peptide delivery)
 RN 77-92-9 HCAPLUS
 CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy- (9CI) (CA INDEX NAME)



IT 25086-15-1, Eudragit S100
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (coating; proteolytic enzymes in intestinal peptide delivery)
 RN 25086-15-1 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

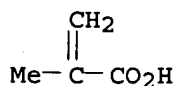
CM 1

CRN 80-62-6
 CMF C5 H8 O2



CM 2

CRN 79-41-4
 CMF C4 H6 O2



IT 9031-94-1, Aminopeptidase
 RL: BSU (Biological study, unclassified); BIOL (Biological study)

(inhibitors; proteolytic enzymes in intestinal peptide delivery)

RN 9031-94-1 HCAPLUS

CN Aminopeptidase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

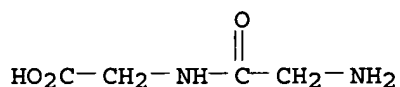
IT 556-50-3, Glycylglycine 673-08-5 3321-03-7,
 Glycylphenylalanine 3997-90-8, D-Alanylglycine 6234-26-0
 15080-84-9 21778-69-8 57982-77-1, Buserelin
 58569-55-4, Met-enkephalin 60254-82-2 61090-95-7
 61370-87-4 61370-88-5 67706-17-6
 69537-64-0 69558-55-0 85465-82-3
 85466-18-8

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)

(proteolytic enzymes in intestinal peptide delivery)

RN 556-50-3 HCAPLUS

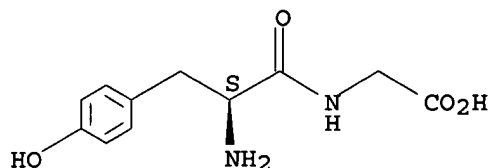
CN Glycine, glycyl- (9CI) (CA INDEX NAME)



RN 673-08-5 HCAPLUS

CN Glycine, L-tyrosyl- (9CI) (CA INDEX NAME)

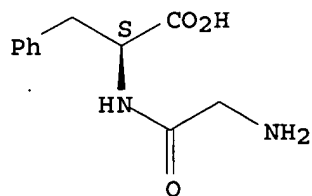
Absolute stereochemistry.



RN 3321-03-7 HCAPLUS

CN L-Phenylalanine, glycyl- (9CI) (CA INDEX NAME)

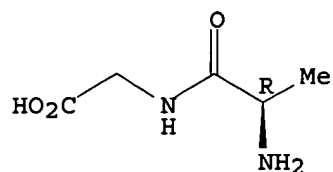
Absolute stereochemistry.



RN 3997-90-8 HCAPLUS

CN Glycine, D-alanyl- (9CI) (CA INDEX NAME)

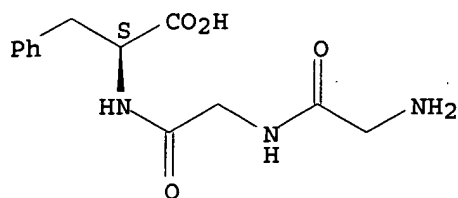
Absolute stereochemistry.



RN 6234-26-0 HCAPLUS

CN L-Phenylalanine, glycylglycyl- (9CI) (CA INDEX NAME)

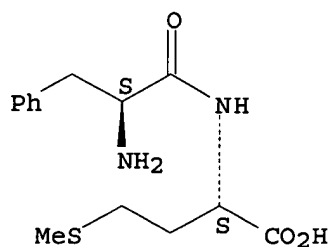
Absolute stereochemistry.



RN 15080-84-9 HCAPLUS

CN L-Methionine, L-phenylalanyl- (9CI) (CA INDEX NAME)

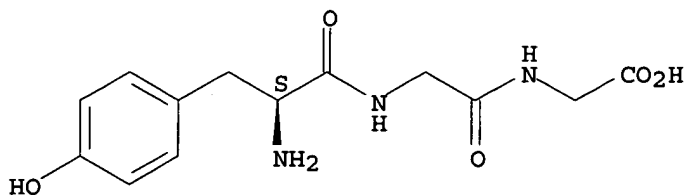
Absolute stereochemistry.



RN 21778-69-8 HCAPLUS

CN Glycine, L-tyrosylglycyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

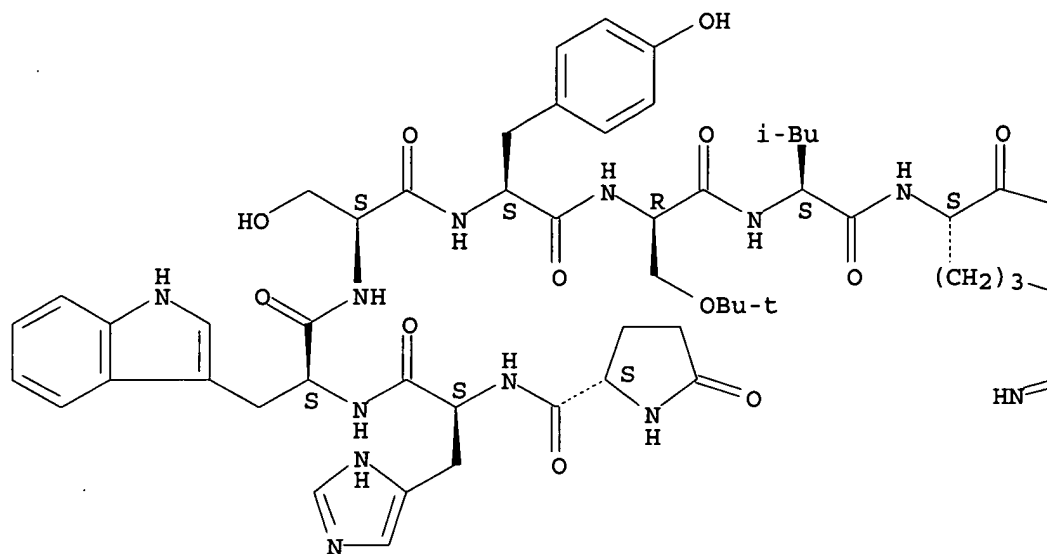


RN 57982-77-1 HCAPLUS

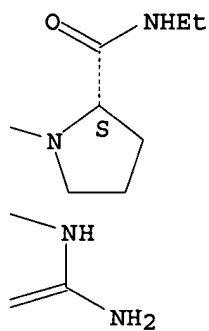
CN 1-9-Luteinizing hormone-releasing factor (swine), 6-[O-(1,1-dimethylethyl)-D-serine]-9-(N-ethyl-L-prolinamide)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



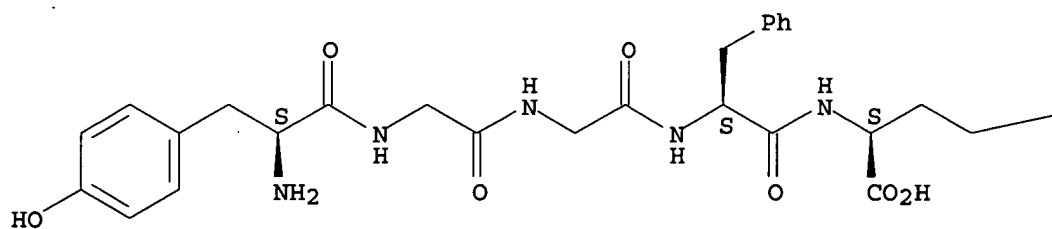
PAGE 1-B



RN 58569-55-4 HCAPLUS
 CN 1-5-Adrenorphin (human) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



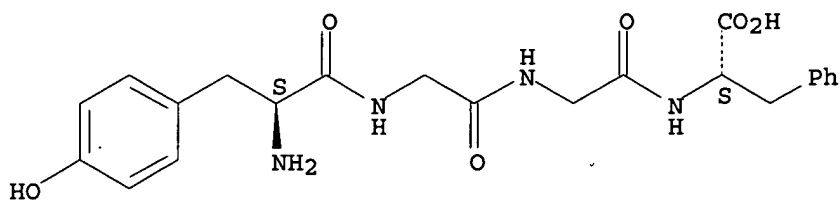
PAGE 1-B

—SMe

RN 60254-82-2 HCAPLUS

CN L-Phenylalanine, L-tyrosylglycylglycyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

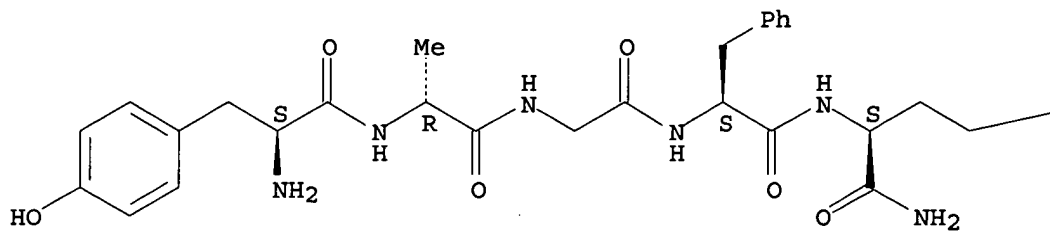


RN 61090-95-7 HCAPLUS

CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

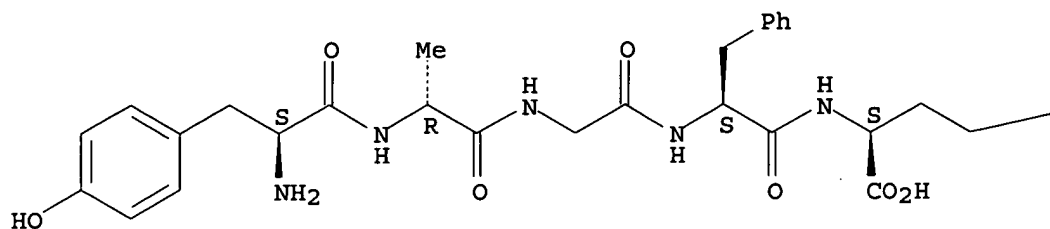
—SMe

RN 61370-87-4 HCAPLUS

CN L-Methionine, L-tyrosyl-D-alanylglycyl-L-phenylalanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



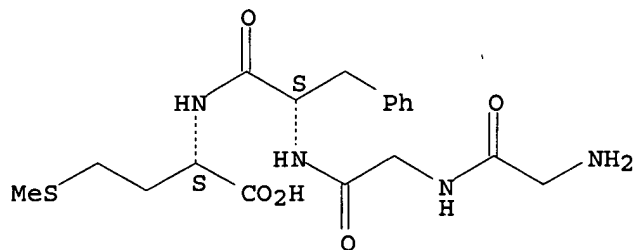
PAGE 1-B

—SMe

RN 61370-88-5 HCAPLUS

CN L-Methionine, glycylglycyl-L-phenylalanyl- (9CI) (CA INDEX NAME)

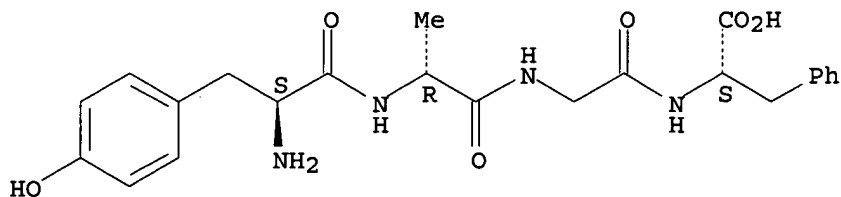
Absolute stereochemistry.



RN 67706-17-6 HCAPLUS

CN L-Phenylalanine, L-tyrosyl-D-alanylglycyl- (9CI) (CA INDEX NAME)

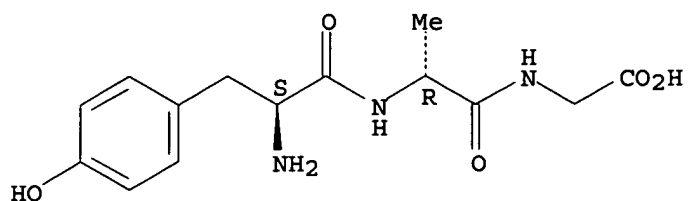
Absolute stereochemistry.



RN 69537-64-0 HCAPLUS

CN Glycine, L-tyrosyl-D-alanyl- (9CI) (CA INDEX NAME)

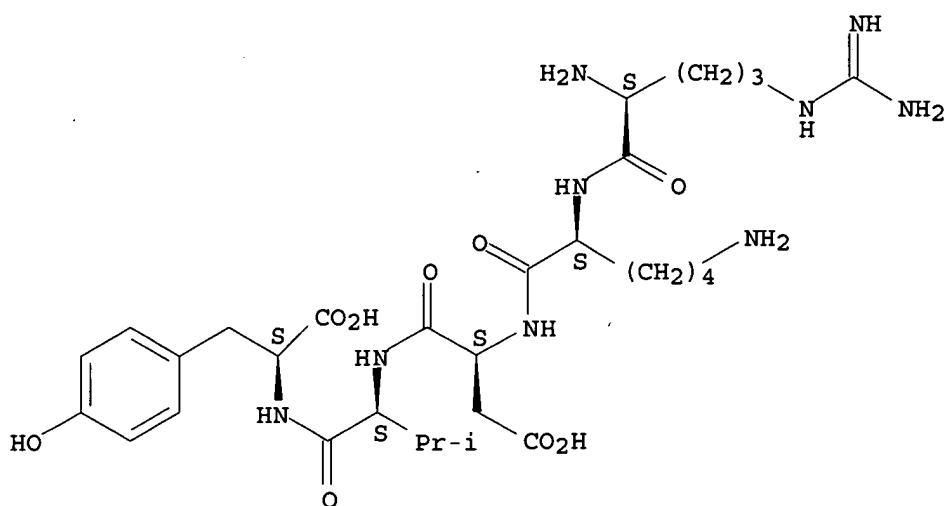
Absolute stereochemistry.



RN 69558-55-0 HCAPLUS

CN L-Tyrosine, L-arginyl-L-lysyl-L- α -aspartyl-L-valyl- (9CI) (CA INDEX NAME)

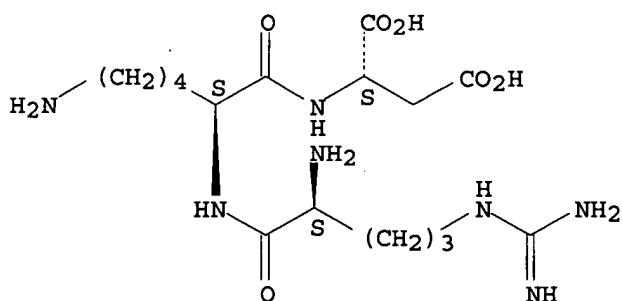
Absolute stereochemistry.



RN 85465-82-3 HCAPLUS

CN L-Aspartic acid, L-arginyl-L-lysyl- (9CI) (CA INDEX NAME)

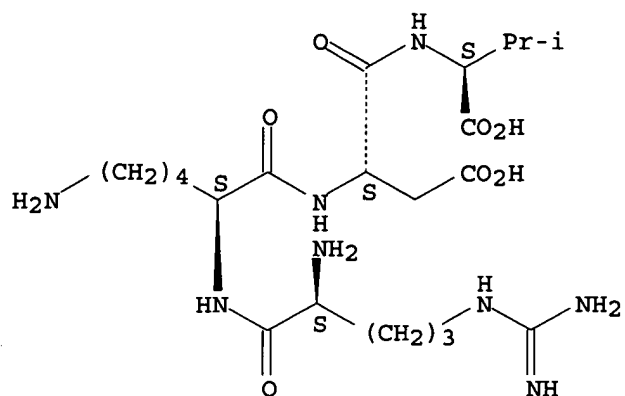
Absolute stereochemistry.



RN 85466-18-8 HCAPLUS

CN L-Valine, L-arginyl-L-lysyl-L- α -aspartyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 66960-34-7, Metkephamid

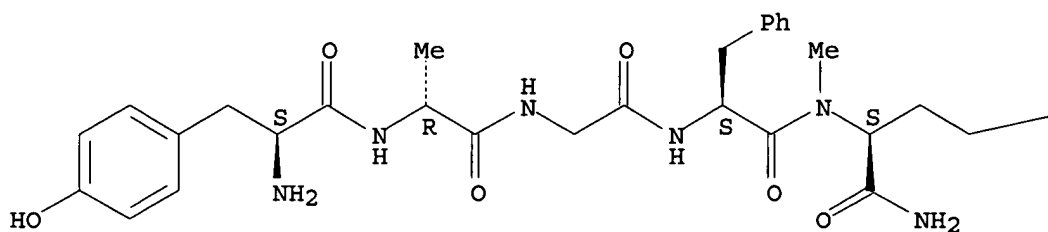
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (proteolytic enzymes in intestinal peptide delivery)

RN 66960-34-7 HCAPLUS

CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

— SMe

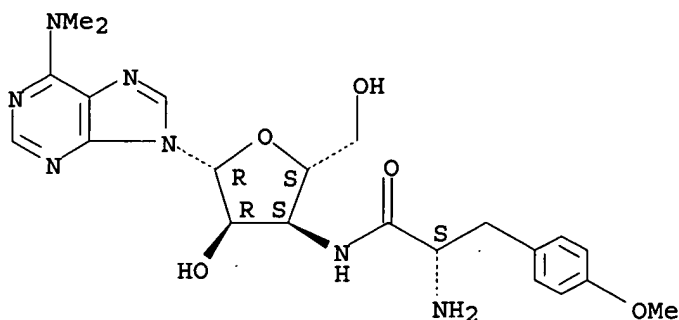
IT 53-79-2, Puromycin

RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (proteolytic enzymes in intestinal peptide delivery)

RN 53-79-2 HCAPLUS

CN Adenosine, 3'-[[(2S)-2-amino-3-(4-methoxyphenyl)-1-oxopropyl]amino]-3'-deoxy-N,N-dimethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 9001-92-7, Proteolytic enzyme 9004-34-6, Cellulose,
biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(proteolytic enzymes in intestinal peptide delivery)
RN 9001-92-7 HCAPLUS
CN Proteinase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9004-34-6 HCAPLUS
CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L45 ANSWER 23 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:701664 HCAPLUS

DOCUMENT NUMBER: 123:103077

TITLE: **Gastrointestinal** absorption of peptide drug:
quantitative evaluation of the degradation and the
permeation of metkephamid in rat small intestine
AUTHOR(S): Taki, Yoko; Sakane, Toshiyasu; Nadai, Tanekazu;
Sezaki, Hitoshi; Amidon, Gordon L.; Langguth, Peter;
Yamashita, Shinji
CORPORATE SOURCE: Fac. Pharm. Sci., Setsunan Univ., Osaka, 573-01, Japan
SOURCE: Journal of Pharmacology and Experimental Therapeutics
(1995), 274(1), 373-7
CODEN: JPETAB; ISSN: 0022-3565
PUBLISHER: Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The intestinal absorption of metkephamid (MKA), an analog of natural
[Met]enkephalin, was investigated by means of vascular perfusion of the
rat small intestine. Most of the MKA administered to the jejunal loop was
degraded in the lumen by enzymic hydrolysis, whereas only 0.3-1.2% of it
was absorbed into the vascular flow. This means that enzymic degradation is a
major barrier against the intestinal absorption of MKA. The absorption of
MKA was divided into two steps, degradation and permeation, and is expressed
as clearance from the intestine. The degradation clearance (CLd) of MKA was
60-200-fold higher than the permeation clearance (CLp), indicating the
rapid hydrolysis of MKA before absorption. The absorbed fraction of MKA
increased with increasing luminal MKA concentration, mainly due to an increase

in

CLp rather than a decrease in CLd. MKA was degraded not only before
absorption but also during permeation across the intestinal epithelium.
Three kinds of enzyme inhibitors were co-administered with MKA into the
intestinal loop. Puromycin, an aminopeptidase M inhibitor, markedly
enhanced MKA absorption by both decreasing CLd and increasing CLp,

indicating the predominant role of this enzyme in MKA degradation. Bestatin, another aminopeptidase M inhibitor, also effectively suppressed the degradation of MKA before absorption, whereas it only slightly increased CLp. It was further found that bestatin was less effective in inhibiting MKA hydrolysis during permeation. Thiorphan, an enkephalinase inhibitor, had no effect on MKA absorption.

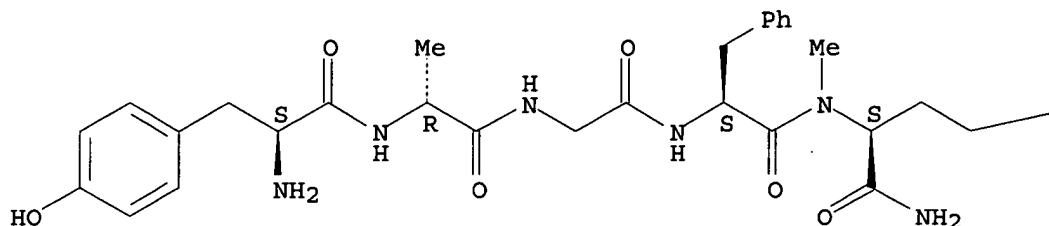
IT 9054-63-1, Aminopeptidase M 66960-34-7, Metkephamid
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (metkephamid degradation and permeation in small intestine)
 RN 9054-63-1 HCAPLUS
 CN Aminopeptidase, microsomal (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 66960-34-7 HCAPLUS
 CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI)
 (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



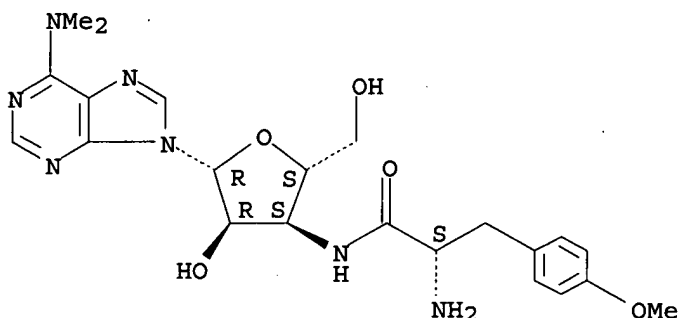
PAGE 1-B

— SMe

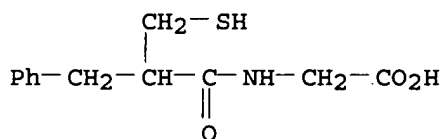
L45 ANSWER 24 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1995:343050 HCAPLUS
 DOCUMENT NUMBER: 122:122426
 TITLE: **Gastrointestinal** absorption of metkephamid -
 quantitative evaluation of degradation and permeation
 AUTHOR(S): Taki, Y.; Yamashita, S.; Sakane, T.; Nadai, T.;
 Sezaki, H.; Langguth, P.; Amidon, G. L.
 CORPORATE SOURCE: Faculty Pharmaceutical Sciences, Setsunan University,
 Osaka, 573-01, Japan
 SOURCE: Proceedings of the International Symposium on
 Controlled Release of Bioactive Materials (1994),
 21ST, 814-15
 CODEN: PCRMEY; ISSN: 1022-0178
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Most of the metkephamid was enzymically degraded before and during its
 absorption in the isolated rat small intestine loop. Puromycin, an
 aminopeptidase inhibitor, increased the amount of metkephamid absorbed,
 whereas thiorphan, and endopeptidase inhibitor, had no effect.

IT 53-79-2, Puromycin 76721-89-6, Thiorphan
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
 (gastrointestinal absorption of metkephamid - effects of puromycin and thiorphan)
 RN 53-79-2 HCAPLUS
 CN Adenosine, 3'-[[[(2S)-2-amino-3-(4-methoxyphenyl)-1-oxopropyl]amino]-3'-deoxy-N,N-dimethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



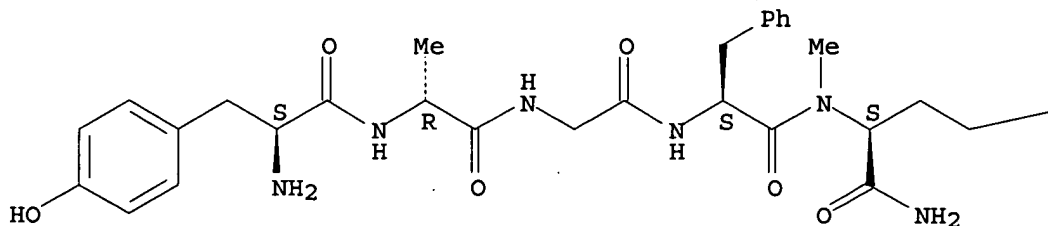
RN 76721-89-6 HCAPLUS
 CN Glycine, N-[2-(mercaptomethyl)-1-oxo-3-phenylpropyl]- (9CI) (CA INDEX NAME)



IT 66960-34-7, Metkephamid
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (gastrointestinal absorption of metkephamid - effects of puromycin and thiorphan)
 RN 66960-34-7 HCAPLUS
 CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

—SMe

IT 9031-94-1, Aminopeptidase
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (in **gastrointestinal** absorption of metkephamid and effect of
 puromycin)
 RN 9031-94-1 HCAPLUS
 CN Aminopeptidase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 9001-92-7, Endopeptidase
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (in **gastrointestinal** absorption of metkephamid and effect of
 thiorphan)
 RN 9001-92-7 HCAPLUS
 CN Proteinase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L45 ANSWER 25 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1993:494118 HCAPLUS
 DOCUMENT NUMBER: 119:94118
 TITLE: Fatty acid salt preparations containing other
 biologically active materials for use as feed
 supplements
 INVENTOR(S): Vinci, Alfredo; Lajoie, M. Stephen; Sweeney, Thomas
 F.; Cummings, Kenneth R.
 PATENT ASSIGNEE(S): Church and Dwight Co., Inc., USA
 SOURCE: PCT Int. Appl., 16 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9310669	A1	19930610	WO 1992-US7337	19920904
W: AT, AU, BB, BG, BR, CA, CH, CS, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MG, MN, MW, NL, NO, PL, RO, RU, SD, SE				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG				
AU 9225774	A1	19930628	AU 1992-25774	19920904
EP 619706	A1	19941019	EP 1992-919798	19920904
EP 619706	B1	19991124		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, SE				
BR 9206859	A	19960416	BR 1992-6859	19920904
AT 186817	E	19991215	AT 1992-919798	19920904
CA 2124925	C	20011002	CA 1992-2124925	19920904
US 5456927	A	19951010	US 1993-149305	19931109
WO 9512987	A1	19950518	WO 1994-US9137	19940822
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN				
RW: KE, MW, SD, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC,				

NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
 AU 9476315 A1 19950529 AU 1994-76315 19940822
 PRIORITY APPLN. INFO.: US 1991-802261 A 19911204

US 1993-149305 19931109
 US 1993-7013 19930121
 WO 1992-US7337 A 19920904
 WO 1994-US9137 W 19940822

AB The salts of C14-22 fatty acids for use as feed supplements for cattle are prepared with simultaneous incorporation of other feed supplements. By using the alkali **earth** metal salts of fatty acids, the fatty acids and the incorporated supplements have rumen bypass protection and so do not adversely affect rumen microflora. A series of feed supplements 35 were included in a stirred reaction mixture including palm oil fatty acids 700, calcium oxide 100 and water 300 g. During the highly exothermic reaction nicotinic acid, methionine, lysine, or choline were broken down to a significant extent, but methionine hydroxy analog and nicotinamide were unaffected.

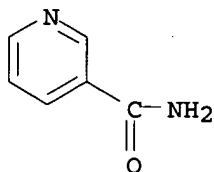
IT 98-92-0, Nicotinamide 583-91-5

RL: BIOL (Biological study)

(as feed supplement, rumen bypass-protected, preparation of fatty acid calcium salts in relation to)

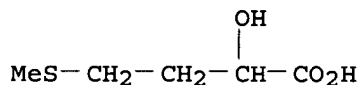
RN 98-92-0 HCAPLUS

CN 3-Pyridinecarboxamide (9CI) (CA INDEX NAME)



RN 583-91-5 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



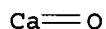
IT 1305-78-8, Calcium oxide, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(reactions of, in preparation fatty acid calcium salts, rumen bypass-protected feed supplements in relation to)

RN 1305-78-8 HCAPLUS

CN Calcium oxide (CaO) (9CI) (CA INDEX NAME)



L45 ANSWER 26 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1992:433680 HCAPLUS

DOCUMENT NUMBER: 117:33680

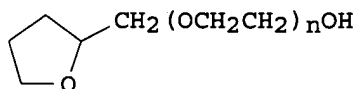
TITLE: A pharmaceutical preparation containing glycofurols and ethylene glycols

INVENTOR(S): Bechgaard, Erik; Gizurarson, Sveinbjorn; Hjortkjaer,

PATENT ASSIGNEE(S): Rolf Kuehlman
 SOURCE: Novo-Nordisk A/S, Den.
 PCT Int. Appl., 68 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9116929	A1	19911114	WO 1991-DK119	19910503
W: AU, BG, BR, CA, FI, HU, JP, KP, KR, NO, PL, RO, SU				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
CA 2082495	AA	19911111	CA 1991-2082495	19910503
AU 9178809	A1	19911127	AU 1991-78809	19910503
EP 532546	A1	19930324	EP 1991-909922	19910503
EP 532546	B1	19980318		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 05507085	T2	19931014	JP 1991-509706	19910503
JP 3219096	B2	20011015		
AT 164080	E	19980415	AT 1991-909922	19910503
ES 2117642	T3	19980816	ES 1991-909922	19910503
ZA 9103433	A	19930127	ZA 1991-3433	19910507
AU 9176435	A1	19911114	AU 1991-76435	19910509
AU 654950	B2	19941201		
CN 1056812	A	19911211	CN 1991-103023	19910509
US 5397771	A	19950314	US 1993-118683	19930910
US 5428006	A	19950627	US 1993-151802	19931115
AU 9513586	A1	19950601	AU 1995-13586	19950227
AU 687496	B2	19980226		
US 5693608	A	19971202	US 1995-395838	19950228
PRIORITY APPLN. INFO.:			DK 1990-1170	A 19900510
			DK 1990-2075	A 19900830
			WO 1991-DK119	A 19910503
			US 1991-696564	B2 19910508
			US 1991-791651	B1 19911114
			US 1992-870893	B1 19920420
			US 1993-71604	B1 19930604
			US 1993-151802	A1 19931115

GI



I

AB A pharmaceutical applicable to a mucosal membrane of a mammal comprises ≥ 1 substance(s) selected from the group consisting of glycofurols (I) wherein $n = 1-8$, and ethylene glycols $\text{H}(\text{OCH}_2\text{CH}_2)_p\text{OH}$ wherein $p = 1-14$. The pharmaceutical produces a high plasma concentration of the active drug as rapid as by i.v. injection. For example, 10 mg clonazepam was dissolved in a vehicle containing tetraethylene glycol and glycofurol. This preparation

was

administered into each nasal cavity of rabbits. The plasma concentration after intranasal application was about the same at 2 min, comparing to that after an i.v. injection.

IT 50-56-6, Oxytocin, biological studies 50-57-7, Lypressin

146-22-5, Nitrazepam 439-14-5, Diazepam 846-49-1
 , Lorazepam 1622-61-3, Clonazepam 1622-62-4,
 Flunitrazepam 9001-25-6, Blood coagulation factor VII
 9001-27-8, Blood coagulation factor VIII 9001-28-9,
 Blood coagulation factor IX 9002-67-9, LH 9002-68-0,
 FSH 9002-72-6, Growth hormone 9004-10-8, Insulin,
 biological studies 9007-12-9, Calcitonin 9007-92-5,
 Glucagon, biological studies 9034-40-6, LHRH 11000-17-2
 , Vasopressin 16679-58-6, DDAVP 28911-01-5, Triazolam
 50647-00-2, LTH 58822-25-6, Leucine enkephalin
 63631-40-3, DADLE 66960-34-7, Metkephamid
 RL: BIOL (Biological study)

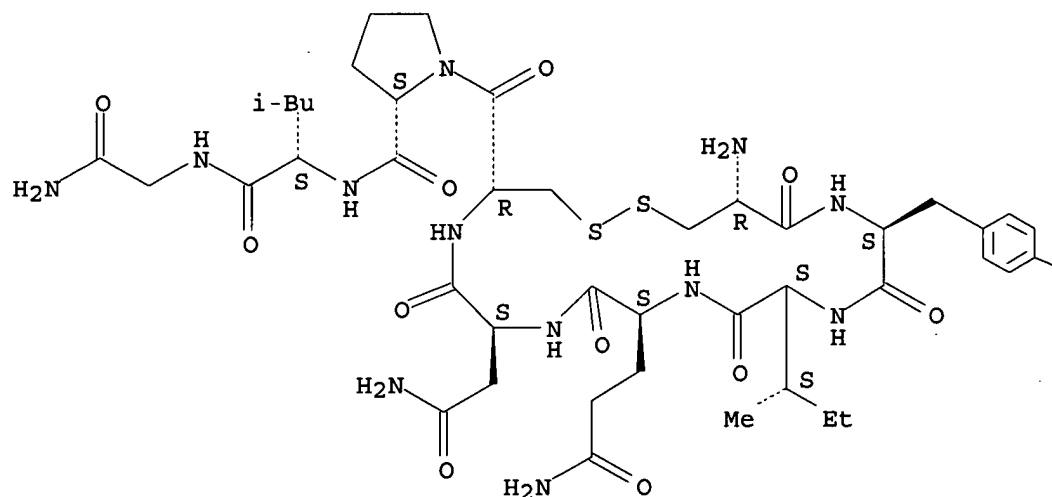
(pharmaceutical intranasal formulation containing)

RN 50-56-6 HCAPLUS

CN Oxytocin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

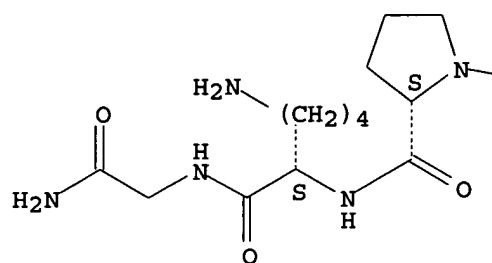
—OH

RN 50-57-7 HCAPLUS

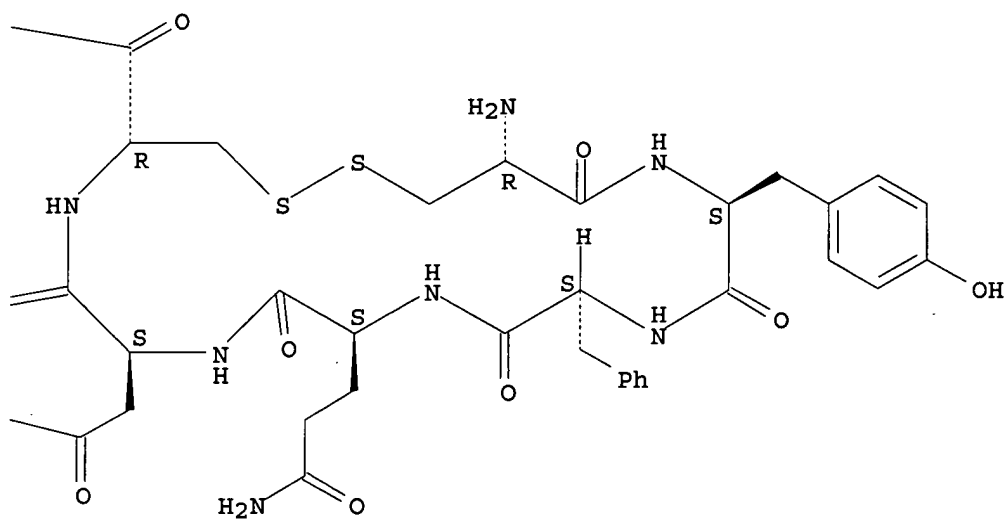
CN Vasopressin, 8-L-lysine- (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

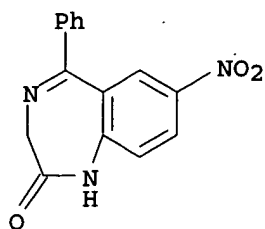
PAGE 1-A



PAGE 1-B

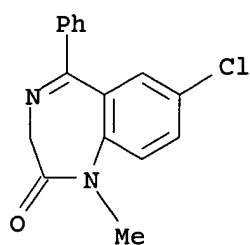


RN 146-22-5 HCAPLUS
 CN 2H-1,4-Benzodiazepin-2-one, 1,3-dihydro-7-nitro-5-phenyl- (8CI, 9CI) (CA
 INDEX NAME)



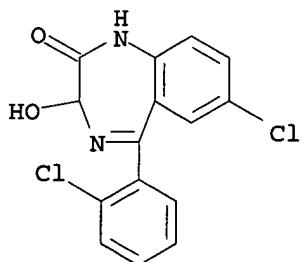
RN 439-14-5 HCAPLUS

CN 2H-1,4-Benzodiazepin-2-one, 7-chloro-1,3-dihydro-1-methyl-5-phenyl- (8CI, 9CI) (CA INDEX NAME)



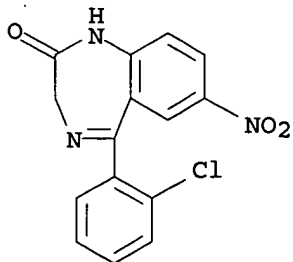
RN 846-49-1 HCAPLUS

CN 2H-1,4-Benzodiazepin-2-one, 7-chloro-5-(2-chlorophenyl)-1,3-dihydro-3-hydroxy- (9CI) (CA INDEX NAME)

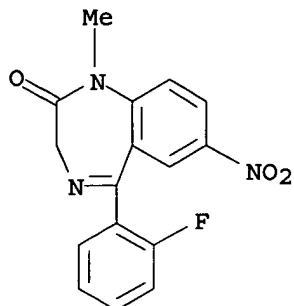


RN 1622-61-3 HCAPLUS

CN 2H-1,4-Benzodiazepin-2-one, 5-(2-chlorophenyl)-1,3-dihydro-7-nitro- (9CI) (CA INDEX NAME)



RN 1622-62-4 HCAPLUS
CN 2H-1,4-Benzodiazepin-2-one, 5-(2-fluorophenyl)-1,3-dihydro-1-methyl-7-nitro- (9CI) (CA INDEX NAME)



RN 9001-25-6 HCAPLUS
CN Blood-coagulation factor VII (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9001-27-8 HCAPLUS
CN Blood-coagulation factor VIII, complex (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9001-28-9 HCAPLUS
CN Blood-coagulation factor IX (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9002-67-9 HCAPLUS
CN Luteinizing hormone (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9002-68-0 HCAPLUS
CN Follicle-stimulating hormone (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9002-72-6 HCAPLUS
CN Somatotropin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9004-10-8 HCAPLUS
CN Insulin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9007-12-9 HCAPLUS
CN Calcitonin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9007-92-5 HCAPLUS
CN Glucagon (7CI, 8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9034-40-6 HCAPLUS
CN Luteinizing hormone-releasing factor (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 11000-17-2 HCAPLUS

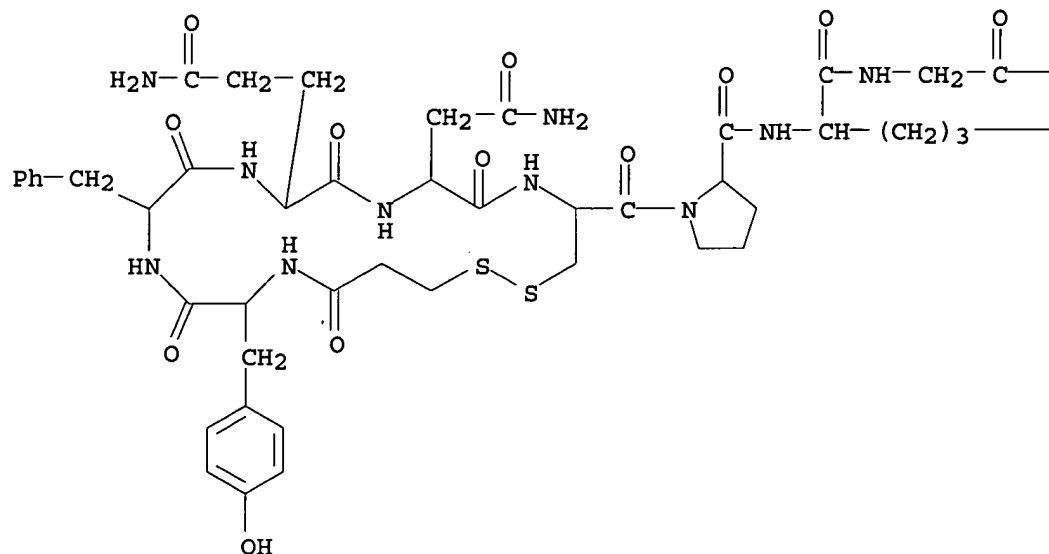
CN Vasopressin (7CI, 8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 16679-58-6 HCAPLUS

CN Vasopressin, 1-(3-mercaptopropanoic acid)-8-D-arginine- (9CI) (CA INDEX NAME)

PAGE 1-A



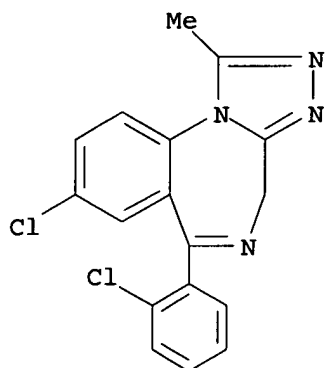
PAGE 1-B

— NH₂

— NH—C—NH₂
||
NH

RN 28911-01-5 HCAPLUS

CN 4H-[1,2,4]Triazolo[4,3-a][1,4]benzodiazepine, 8-chloro-6-(2-chlorophenyl)-1-methyl- (9CI) (CA INDEX NAME)

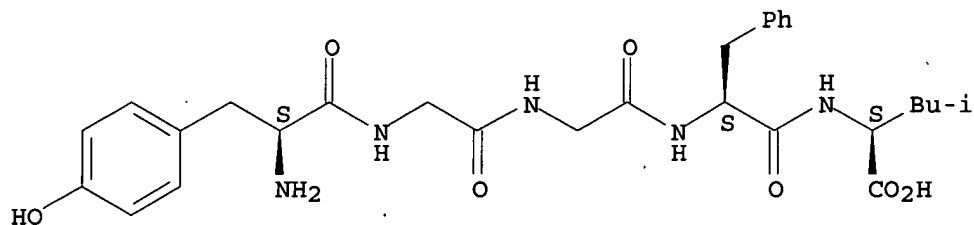


RN 50647-00-2 HCAPLUS
 CN LTH (polymer) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

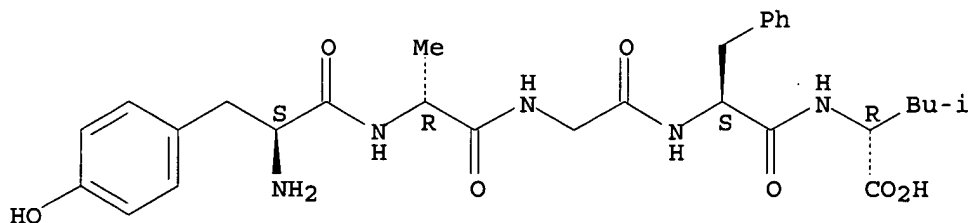
RN 58822-25-6 HCAPLUS
 CN 1-5- β -Neoendorphin (human) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 63631-40-3 HCAPLUS
 CN D-Leucine, L-tyrosyl-D-alanylglycyl-L-phenylalanyl- (9CI) (CA INDEX NAME)

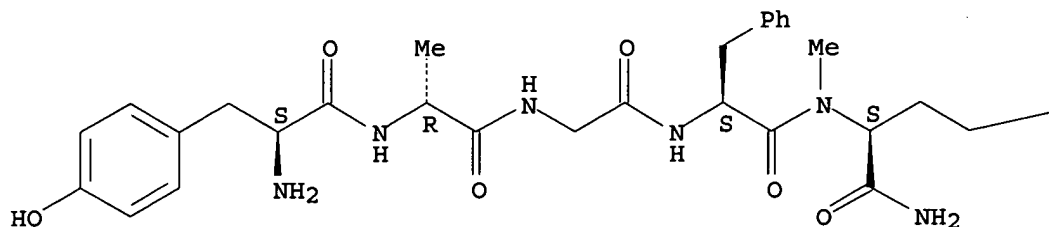
Absolute stereochemistry.



RN 66960-34-7 HCAPLUS
 CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI)
 (CA INDEX NAME)

Absolute stereochemistry.

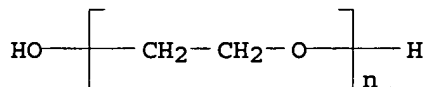
PAGE 1-A



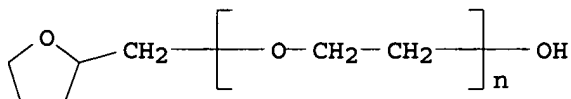
PAGE 1-B

— SMe

IT 25322-68-3, Ethylene glycol polymer
 RL: BIOL (Biological study)
 (pharmaceutical intranasal formulation containing glycofurol and, as carriers)
 RN 25322-68-3 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy- (9CI) (CA INDEX NAME)



IT 31692-85-0, Glycofurol
 RL: BIOL (Biological study)
 (pharmaceutical intranasal formulation containing polyethylene and, as carriers)
 RN 31692-85-0 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α -[(tetrahydro-2-furanyl)methyl]- ω -hydroxy- (9CI) (CA INDEX NAME)



L45 ANSWER 27 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1990:509112 HCAPLUS
 DOCUMENT NUMBER: 113:109112
 TITLE: Opioid involvement in epileptogenic and neurovisceral activity
 AUTHOR(S): Pinsky, Carl; Bose, Ranjan; Hall, Arleen; Glavin, Gary B.
 CORPORATE SOURCE: Fac. Med., Univ. Manitoba, Winnipeg, MB, R3E 0W3, Can.
 SOURCE: Progress in Clinical and Biological Research (1990),

328(Int. Narc. Res. Conf. (INRC) '89), 421-4

CODEN: PCBRD2; ISSN: 0361-7742

DOCUMENT TYPE:

Journal

LANGUAGE:

English

AB The effects of opioid antagonists (naloxone, ICI-154129, ICI-174864) and agonists (U-50488, methephamid) on the occurrence of **neuro**l. signs (myoclonus, disorientation, memory loss), peripheral toxicity (**gastrointestinal** disorders, bleeding), and mortality were studied in mice given i.p. domoic acid or extract of mussels contaminated with domoic acid. Ionic acid is a kainate receptor agonist. It caused all the monitored symptoms and its effect was increased or decreased depending on the kind of opioid treatment. The pro- or anticonvulsant effects of the opioid ligands may reflect their effects on **neuroexcitatory** amino acid synapses rather than on opioid receptor subtypes.

IT 14277-97-5, Domoic acid

RL: BIOL (Biological study)

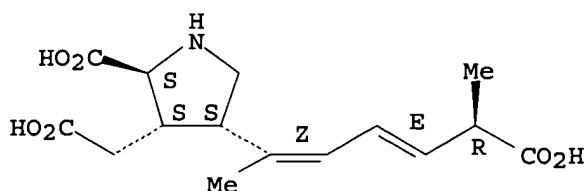
(convulsions and toxicity from, opioid ligands effects on, receptors in)

RN 14277-97-5 HCAPLUS

CN 3-Pyrrolidineacetic acid, 2-carboxy-4-[(1Z,3E,5R)-5-carboxy-1-methyl-1,3-hexadienyl]-, (2S,3S,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



IT 465-65-6, Naloxone 66960-34-7 67198-13-4,

U-50488 83420-94-4, ICI-154129 89352-67-0, ICI-174864

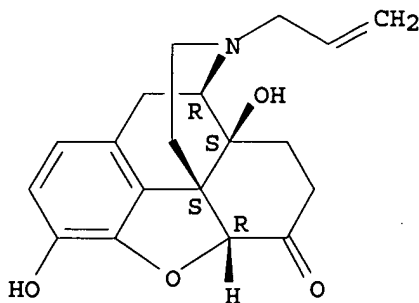
RL: BIOL (Biological study)

(domoic acid-induced convulsions and toxicity response to, receptors in)

RN 465-65-6 HCAPLUS

CN Morphinan-6-one, 4,5-epoxy-3,14-dihydroxy-17-(2-propenyl)-, (5α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



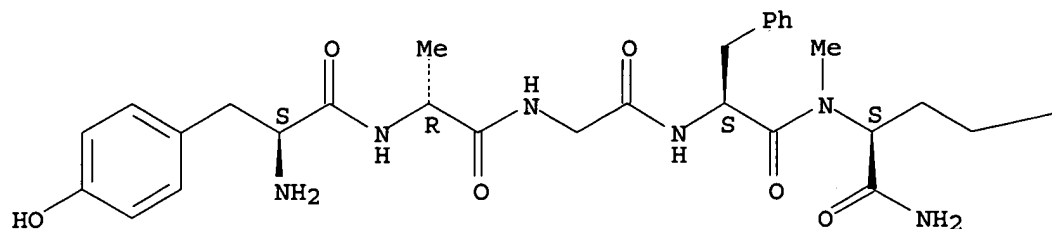
RN 66960-34-7 HCAPLUS

CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI)

(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



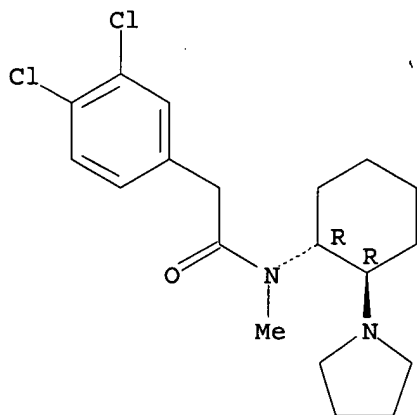
PAGE 1-B

— SMe

RN 67198-13-4 HCAPLUS

CN Benzeneacetamide, 3,4-dichloro-N-methyl-N-[(1R,2R)-2-(1-pyrrolidinyl)cyclohexyl]-, rel- (9CI) (CA INDEX NAME)

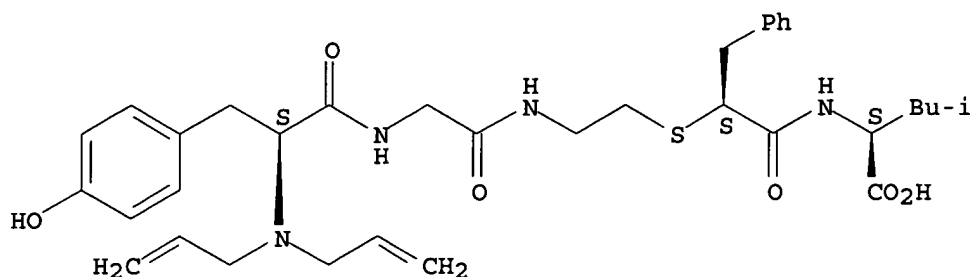
Relative stereochemistry.



RN 83420-94-4 HCAPLUS

CN L-Leucine, N,N-di-2-propenyl-L-tyrosylglycyl-(αS)-α-[(2-aminoethyl)thio]benzenepropanoyl- (9CI) (CA INDEX NAME)

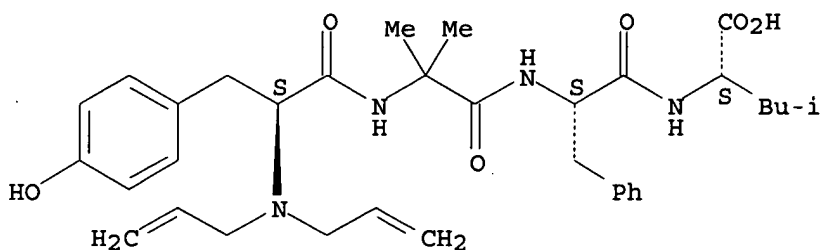
Absolute stereochemistry.



RN 89352-67-0 HCAPLUS

CN L-Leucine, N,N-di-2-propenyl-L-tyrosyl-2-methylalanyl-L-phenylalanyl-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L45 ANSWER 28 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1990:229634 HCAPLUS

DOCUMENT NUMBER: 112:229634

TITLE: Effects of metkephamid (LY127623), a selective delta
opioid receptor agonist, on gastric function

AUTHOR(S): Glavin, Gary B.; Pinsky, Carl; Hall, Arleen M.

CORPORATE SOURCE: Fac. Med., Univ. Manitoba, Winnipeg, MB, R3E 0W3, Can.

SOURCE: Life Sciences (1990), 46(15), 1075-9

CODEN: LIFSAK; ISSN: 0024-3205

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Metkephamid, a delta opioid receptor agonist, blocked cold-restraint stress ulcers, reduced absolute ethanol-induced gastric ulcers and, at the lowest and highest doses examined, reduced basal gastric acid secretion in conscious rats. The dose profile for effect on stress ulcer formation parallels that seen previously against maximal electroshock seizures, suggesting that both central as well as peripheral delta opioid receptors mediate **gastrointestinal** responses to stress.

IT 66960-34-7, Metkephamid

RL: BIOL (Biological study)

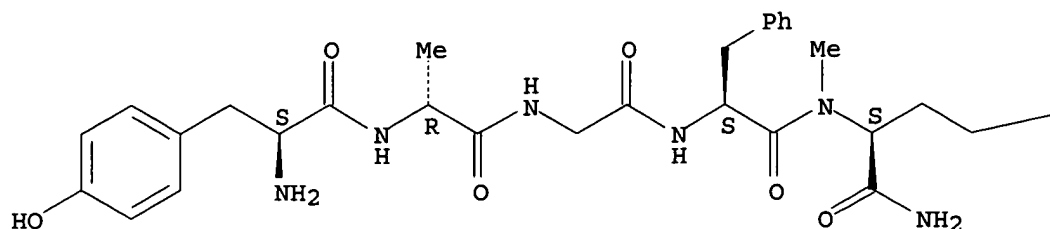
(stomach ulcer induction by stress inhibition by, delta opioid
receptors in)

RN 66960-34-7 HCAPLUS

CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

— SMe

L45 ANSWER 29 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1990:191414 HCAPLUS

DOCUMENT NUMBER: 112:191414

TITLE: L-Methionine antagonism of cis-platinum nephrotoxicity

AUTHOR(S): Basinger, Mark A.; Jones, Mark M.; Holscher, Myron A.

CORPORATE SOURCE: Cent. Mol. Toxicol., Vanderbilt Univ., Nashville, TN, 37235, USA

SOURCE: Toxicology and Applied Pharmacology (1990), 103(1), 1-15

CODEN: TXAPA9; ISSN: 0041-008X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB L-Methionine administered simultaneously with cis-platinum (CDDP) i.v. results in a significant reduction of the nephrotoxicity normally associated with

CDDP without any apparent effect on the antineoplastic activity for rats bearing the Walker 256 carcinosarcoma. CDDP given with L-methionine at a 1:20 mol ratio can be administered to rats at doses up to 35 mg/kg i.v. with the survival of all treated animals (3/3) and up to 56 mg/kg i.v. (bolus injection) with the survival of 3/6 animals, while CDDP administered alone at these levels is lethal. A reduced level of protection against the nephrotoxicity was also achieved at lower mole ratios of L-methionine to CDDP. Renal function was monitored using BUN and serum creatinine levels, and **gastrointestinal** toxicity by weight changes during the course of the expts. A histopathol. examination of

the

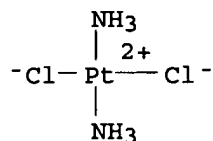
kidneys was also performed to evaluate the protection provided by L-methionine. Under the conditions used, the reaction between L-methionine and CDDP does not appear to proceed so rapidly as to interfere with the antitumor activity of the CDDP. The examination of structural analogs as agents for the control of CDDP-induced nephrotoxicity revealed that the C-S-C-group is the essential group for the protective action in these structures. Although L-methionine can provide renal protection in rats given high doses of CDDP, it does not prevent the accumulation of Pt in the kidney.

IT 15663-27-1, Cisplatinum
RL: BIOL (Biological study)

(antitumor activity and kidney toxicity of, methionine and its analogs
effect on, structure in relation to)

RN 15663-27-1 HCAPLUS

CN Platinum, diamminedichloro-, (SP-4-2)- (9CI) (CA INDEX NAME)



IT 63-68-3, L-Methionine, biological studies 327-57-1,

L-Norleucine 583-91-5 2899-37-8, L-Methioninol

3226-65-1, L-Methionine sulfoxide 13073-35-3

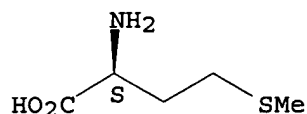
RL: BIOL (Biological study)

(antitumor activity and nephrotoxicity of cisplatin response to)

RN 63-68-3 HCAPLUS

CN L-Methionine (9CI) (CA INDEX NAME)

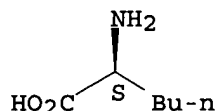
Absolute stereochemistry.



RN 327-57-1 HCAPLUS

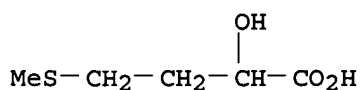
CN L-Norleucine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 583-91-5 HCAPLUS

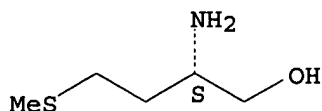
CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



RN 2899-37-8 HCAPLUS

CN 1-Butanol, 2-amino-4-(methylthio)-, (2S)- (9CI) (CA INDEX NAME)

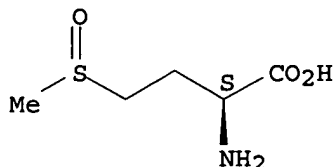
Absolute stereochemistry. Rotation (-).



RN 3226-65-1 HCAPLUS

CN Butanoic acid, 2-amino-4-(methylsulfinyl)-, (2S)- (9CI) (CA INDEX NAME)

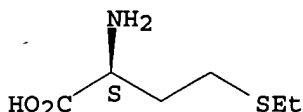
Absolute stereochemistry.



RN 13073-35-3 HCAPLUS

CN L-Homocysteine, S-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 70-18-8, Glutathione, biological studies

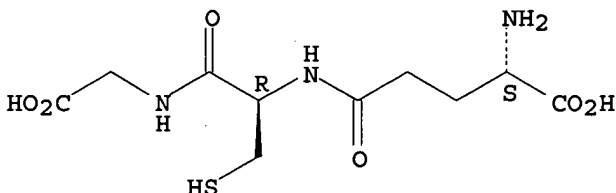
RL: BIOL (Biological study)

(cisplatin antitumor activity and nephrotoxicity response to methionine and its analogs in relation to)

RN 70-18-8 HCAPLUS

CN Glycine, L-γ-glutamyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L45 ANSWER 30 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1989:403357 HCAPLUS

DOCUMENT NUMBER: 111:3357

TITLE: Metabolic indexes of proteolysis in dog blood serum at early times after whole-body uniform γ-irradiation

AUTHOR(S): Konnova, L. A.; Teslenko, V. M.; Komar, V. E.

CORPORATE SOURCE: Cent. Res. Inst. Roentgenol. Radiol., Leningrad, USSR

SOURCE: Radiobiologiya (1989), 29(2), 221-5

CODEN: RADOA8; ISSN: 0033-8192

DOCUMENT TYPE: Journal

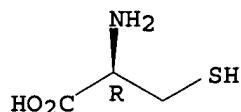
LANGUAGE: Russian

AB The free amino acid concentration and proteinase inhibitor content were studied during the 1st 48 h following whole-body uniform γ-irradiation of dogs (LD30/50 and LD90/45). The contribution of metabolic profile features to individual radiosensitivity is discussed on the basis of anal. of the initial level of metabolic indexes in animals after irradiation A comparison

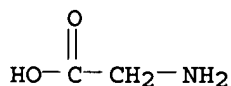
of the dynamics of changes in the indexes under study in the animals which died after **exposure** to different **radiation** doses suggested an important role of **early** hyperactivation of proteolysis in the development of a metabolic decompensation which promoted the fatal outcome of the affection.

IT 52-90-4, Cysteine, biological studies 56-40-6, Glycine, biological studies 56-41-7, Alanine, biological studies 56-45-1, Serine, biological studies 56-84-8, L-Aspartic acid, biological studies 56-86-0, L-Glutamic acid, biological studies 56-87-1, L-Lysine, biological studies 60-18-4, Tyrosine, biological studies 61-90-5, Leucine, biological studies 63-68-3, **Methionine**, biological studies 63-91-2, Phenylalanine, biological studies 71-00-1, Histidine, biological studies 72-18-4, Valine, biological studies 72-19-5, Threonine, biological studies 73-22-3, Tryptophan, biological studies 73-32-5, Isoleucine, biological studies 74-79-3, Arginine, biological studies 147-85-3, Proline, biological studies 37205-61-1, Proteinase inhibitor
 RL: BIOL (Biological study)
 (of blood serum, γ -ray effect on, proteolysis in relation to)
 RN 52-90-4 HCAPLUS
 CN L-Cysteine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

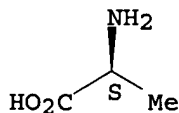


RN 56-40-6 HCAPLUS
 CN Glycine (8CI, 9CI) (CA INDEX NAME)



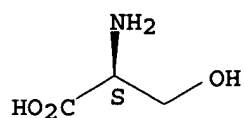
RN 56-41-7 HCAPLUS
 CN L-Alanine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



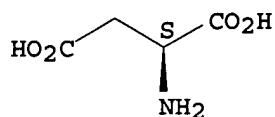
RN 56-45-1 HCAPLUS
 CN L-Serine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



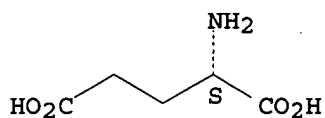
RN 56-84-8 HCAPLUS
CN L-Aspartic acid (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



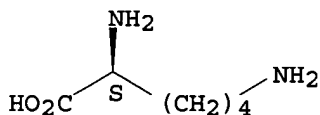
RN 56-86-0 HCAPLUS
CN L-Glutamic acid (9CI) (CA INDEX NAME)

Absolute stereochemistry.



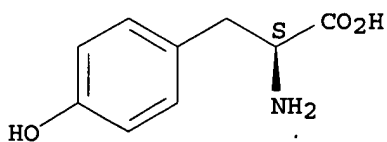
RN 56-87-1 HCAPLUS
CN L-Lysine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



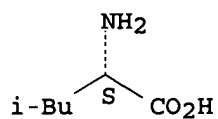
RN 60-18-4 HCAPLUS
CN L-Tyrosine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



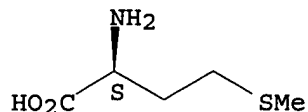
RN 61-90-5 HCAPLUS
CN L-Leucine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



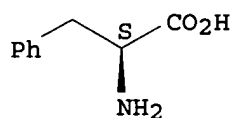
RN 63-68-3 HCAPLUS
CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



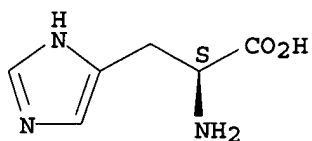
RN 63-91-2 HCAPLUS
CN L-Phenylalanine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



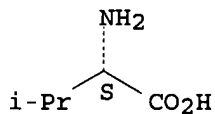
RN 71-00-1 HCAPLUS
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



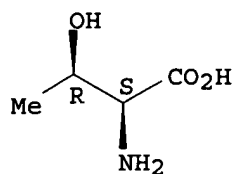
RN 72-18-4 HCAPLUS
CN L-Valine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



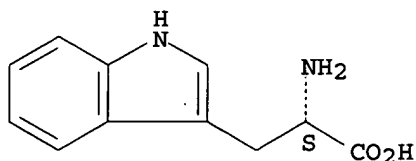
RN 72-19-5 HCAPLUS
CN L-Threonine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



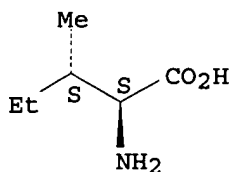
RN 73-22-3 HCAPLUS
CN L-Tryptophan (9CI) (CA INDEX NAME)

Absolute stereochemistry.



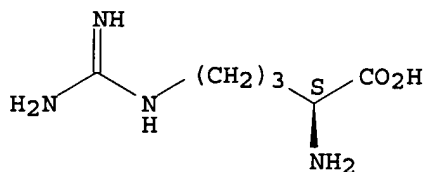
RN 73-32-5 HCAPLUS
CN L-Isoleucine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



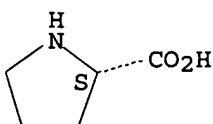
RN 74-79-3 HCAPLUS
CN L-Arginine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 147-85-3 HCAPLUS
CN L-Proline (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 37205-61-1 HCAPLUS
CN Proteinase inhibitor (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L45 ANSWER 31 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1989:113544 HCAPLUS

DOCUMENT NUMBER: 110:113544

TITLE: Effect of days of lactation and methionine hydroxy analog on incorporation of plasma fatty acids into plasma triglycerides

AUTHOR(S): Pullen, David L.; Palmquist, D. L.; Emery, R. S.

CORPORATE SOURCE: Dep. Anim. Sci., Michigan State Univ., East Lansing, MI, 48824, USA

SOURCE: Journal of Dairy Science (1989), 72(1), 49-58

CODEN: JDSCAE; ISSN: 0022-0302

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Cows were fed diets containing 0 or 30 g methionine hydroxy analog (I)/day starting 14 days prepartum. At .apprx.30 and 60 days postpartum, cows were continuously infused i.v. with 1-[14C]palmitic acid for 160 min to achieve steady-state labeling of plasma fatty acids and triglycerides. Turnover of fatty acids and transfer quotients for triglycerides and CO₂ were 3.3 and 2.7 mmol/min; 13.0 and 10.0%; and 8.0 and 5.0%, for control and I, resp. Proportion of fatty acid turnover incorporated into triglycerides and CO₂ were 14.0 and 15.0%; and 21.0 and 18.0, resp., for control and I. I increased 14C recovered in milk fat (52 vs. 36%). Plasma concentration of fatty acids, percent oxidized to CO₂, and percent of

CO₂ from fatty acids decreased with increasing lactation days. Milk fat percent and yield, fatty acid turnover, and oxidation were pos. correlated with concentration of plasma fatty acids, whereas fatty acid incorporated into plasma triglyceride was neg. correlated with fatty acid concentration. Apparently, hepatic triglyceride secretion is not increased in early lactation; further, no effects of analog on lipid metabolism were detected.

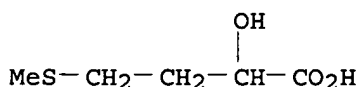
IT 583-91-5, Methionine hydroxy analog

RL: BIOL (Biological study)

(fatty acid metabolism and triglyceride formation by dairy cows in lactation response to, feeding experiment in relation to)

RN 583-91-5 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



IT 57-10-3P, Palmitic acid, biological studies

RL: BIOL (Biological study); PREP (Preparation)

(triglyceride formation from and metabolism of, of blood plasma of dairy cows, methionine hydroxy analog and lactation stage effect on)

RN 57-10-3 HCAPLUS

CN Hexadecanoic acid (9CI) (CA INDEX NAME)



L45 ANSWER 32 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1988:627256 HCAPLUS

DOCUMENT NUMBER: 109:227256

TITLE: Absorption of 14C-2-hydroxy-4-(methylthio)butanoic acid (Alimet) from the hindgut of the broiler chick
AUTHOR(S): Dibner, J. J.; Knight, C. D.; Swick, R. A.; Ivey, F. J.

CORPORATE SOURCE: Anim. Sci. Div., Monsanto Co., St. Louis, MO, 63198, USA

SOURCE: Poultry Science (1988), 67(9), 1314-21
CODEN: POSCAL; ISSN: 0032-5791

DOCUMENT TYPE: Journal

LANGUAGE: English

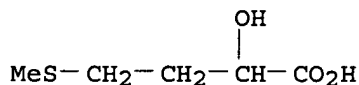
AB The role of the hindgut of the broiler chick in the absorption of 2-hydroxy-4-(methylthio)butanoic acid (HMB) was studied. When 14C-HMB was delivered directly into the hindgut, the rate of absorption from this **gastrointestinal** site was .apprx.40% of the administered dose per h. Plasma radiolabel appearance indicated that the 14C-HMB lost from the hindgut was being absorbed into the bloodstream of the bird. Decarboxylation expts. using cecal microorganisms showed that the loss of 14C-HMB could not be accounted for by bacterial metabolism. When birds were dosed with radiolabeled HMB and tissue samples were tested, results showed that the 14C-HMB that was absorbed from the hindgut was incorporated into protein in a dose-related manner. In addition, an equimolar, equal specific activity i.p. dose of HMB did not alter the rate of HMB absorption from the hindgut. This indicates that HMB absorption from the gut is not limited by HMB already in the body tissues. This result confirmed that the rate of HMB diffusion into the blood and its conversion to methionine in body tissues were sufficient to maintain the concentration gradient required for the continued absorption of HMB. Finally, whole body autoradiog. comparing 35S-HMB and 35S-DL-methionine showed no substantial differences in terms of label d. or distribution. These studies demonstrate that 14C-HMB disappears from the lumen of the large intestine and ceca when it is administered directly into the hindgut. This research confirms that HMB is absorbed throughout the entire **gastrointestinal** system.

IT 583-91-5

RL: BIOL (Biological study)
(absorption of Alimet, from hindgut of chicken)

RN 583-91-5 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



L45 ANSWER 33 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1986:584353 HCAPLUS

DOCUMENT NUMBER: 105:184353

TITLE: Behavioral effects of opioid peptides selective for mu or delta receptors. II. Locomotor activity in nondependent and morphine-dependent rats

AUTHOR(S): Locke, Kenneth W.; Holtzman, Stephen G.

CORPORATE SOURCE: Sch. Med., Emory Univ., Atlanta, GA, 30322, USA

SOURCE: Journal of Pharmacology and Experimental Therapeutics (1986), 238(3), 997-1003
CODEN: JPETAB; ISSN: 0022-3565

DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The intracerebroventricular administration of opioid peptides having selectivity for the μ receptor (DAGO [78123-71-4] and FK 33,824 [64854-64-4]) produced effects on the locomotor activity of nondependent and morphine [57-27-2]-dependent rats that differed both quant. and qual. from those effects produced by peptides having selectivity for the δ receptor (DADLE [63631-40-3] and metkephamid [66960-34-7]) and β -endorphin [60617-12-1], which has similar affinity for both receptors. Peptides selective for the μ receptor had a biphasic effect on locomotor activity of nondependent rats, inducing an increase at low doses and an initial decrease followed by a later increase at higher doses and had an enhanced stimulant effect on locomotor activity with tolerance to the depressant effect in morphine-dependent rats. Peptides selective for the δ receptor and β -endorphin induced only a dose-related increase in the locomotor activity of nondependent rats, and had effects on the locomotor activity of morphine-dependent rats that did not differ substantially from those in nondependent rats. Naltrexone and β -funaltrexamine, an irreversible antagonist, each blocked to a comparable extent the effects of DAGO and DADLE on the locomotor activity of nondependent rats. Thus, effects of opioid peptides that act predominantly at μ or δ receptors on locomotor activity cannot be differentiated in nondependent rats by antagonists, but they can be differentiated in morphine-dependent rats. Thus, the depressant and stimulant effects of opioid peptides on locomotor activity are apparently mediated by distinct neuronal sites.

IT 57-27-2, biological studies

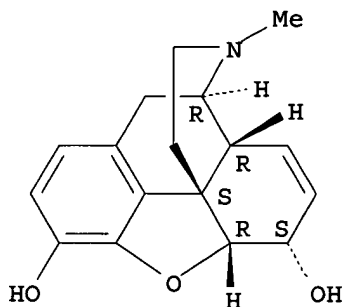
RL: BIOL (Biological study)

(dependence on, locomotor behavior response to endogenous opioids in, receptor differentiation in)

RN 57-27-2 HCAPLUS

CN Morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-methyl-
 (5 α ,6 α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 60617-12-1 63631-40-3 64854-64-4
 66960-34-7 78123-71-4

RL: BIOL (Biological study)

(locomotor behavior response to, in morphine dependence, receptor differentiation in)

RN 60617-12-1 HCAPLUS

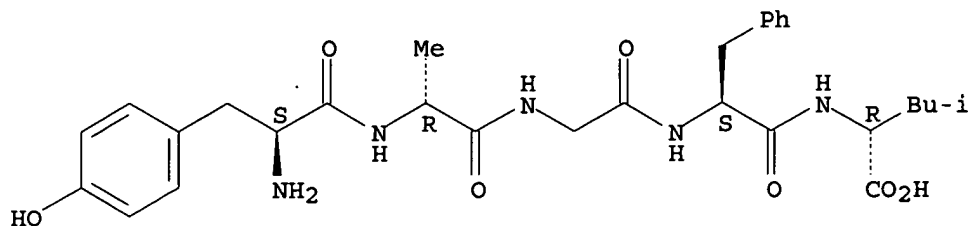
CN β -Endorphin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 63631-40-3 HCAPLUS

CN D-Leucine, L-tyrosyl-D-alanylglycyl-L-phenylalanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

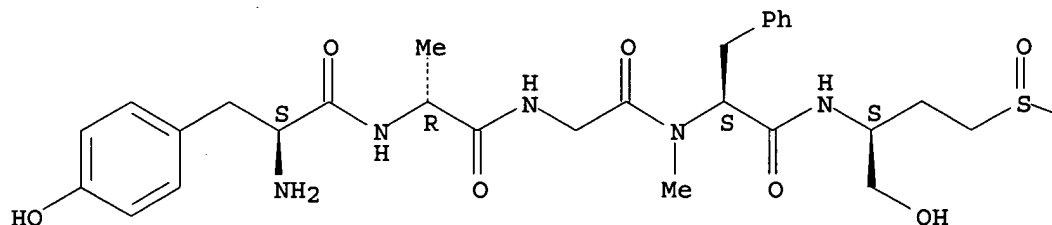


RN 64854-64-4 HCAPLUS

CN L-Phenylalaninamide, L-tyrosyl-D-alanylglycyl-N-[(1S)-1-(hydroxymethyl)-3-(methylsulfinyl)propyl]-N-alpha-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

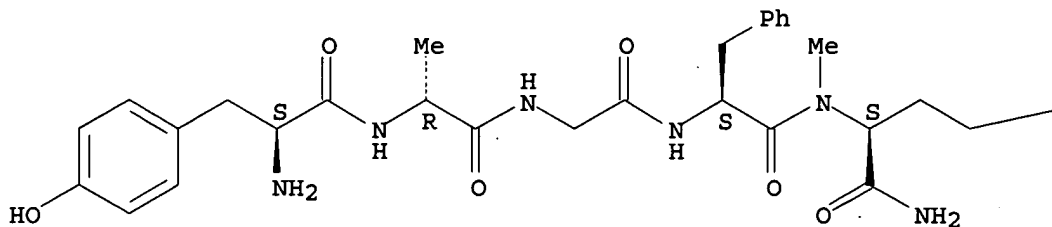
Me

RN 66960-34-7 HCAPLUS

CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



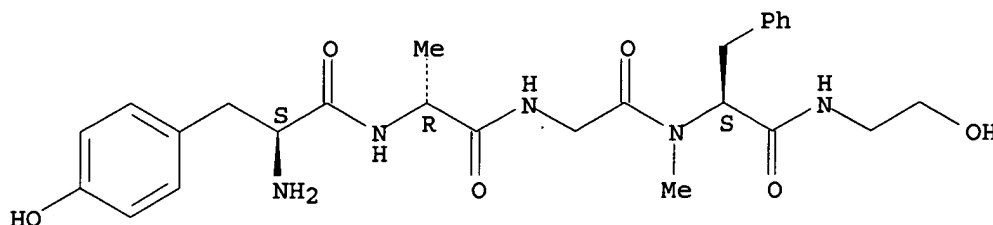
PAGE 1-B

—SMe

RN 78123-71-4 HCAPLUS

CN L-Phenylalaninamide, L-tyrosyl-D-alanylglycyl-N-(2-hydroxyethyl)-N-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L45 ANSWER 34 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1985:217690 HCAPLUS

DOCUMENT NUMBER: 102:217690

TITLE: Studies of metabolites in diarrheal stool specimens containing *Shigella* species by frequency-pulsed electron capture gas-liquid chromatography

AUTHOR(S): Brooks, J. B.; Basta, M. T.; El Kholy, A. M.

CORPORATE SOURCE: Div. Bacterial Dis., Cent. Infect. Dis., Atlanta, GA, 30333, USA

SOURCE: Journal of Clinical Microbiology (1985), 21(4), 599-606

CODEN: JCMIDW; ISSN: 0095-1137

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Diarrheal stool specimens and control stool specimens from Cairo, Egypt, were studied by frequency-pulsed electron capture gas chromatog. (FPEC-GLC). Cases involving *S. sonnei*, cases involving *S. boydii*, and cases involving *S. flexneri* were studied. The aqueous stools were centrifuged, extracted with organic solvents, and derivatized to form specific electron-capturing derivs. of carboxylic acids, alcs., hydroxy acids, and amines. Analyses were performed on high-resolution glass columns with an instrument equipped with an extremely sensitive electron capture detector that is specific for the detection of electron-capturing compds. The diarrheal stools studied had specific FPEC-GLC profiles and contained metabolic markers that readily distinguished between the *Shigella* species studied and *Escherichia coli* producing heat-stable or heat-labile enterotoxins. *S. sonnei* Stools contained hexanoic acid, 2-hydroxy-4-methylmethiobutyric acid, and some unidentified alcs. that distinguished this organism from other enteric pathogens. *S. boydii* Produced an acid that was unique for this species, and *S. flexneri* produced alcs. that could be used to distinguish between it and other enteric organisms. The FPEC-GLC profiles obtained during this study were also very different from those reported earlier for *Clostridium difficile* and rotavirus. This study presents further evidence that the selectivity and sensitivity of FPEC-GLC techniques can be used to rapidly identify causative agents of diarrhea and detect phsiol. changes that

occur in the gut during the course of diarrheal illness.
 IT 142-62-1, analysis 583-91-5
 RL: ANT (Analyte); ANST (Analytical study)
 (determination of, in feces of humans in diarrhea by gas chromatog.)
 RN 142-62-1 HCAPLUS
 CN Hexanoic acid (8CI, 9CI) (CA INDEX NAME)

Me- (CH₂)₄-CO₂H

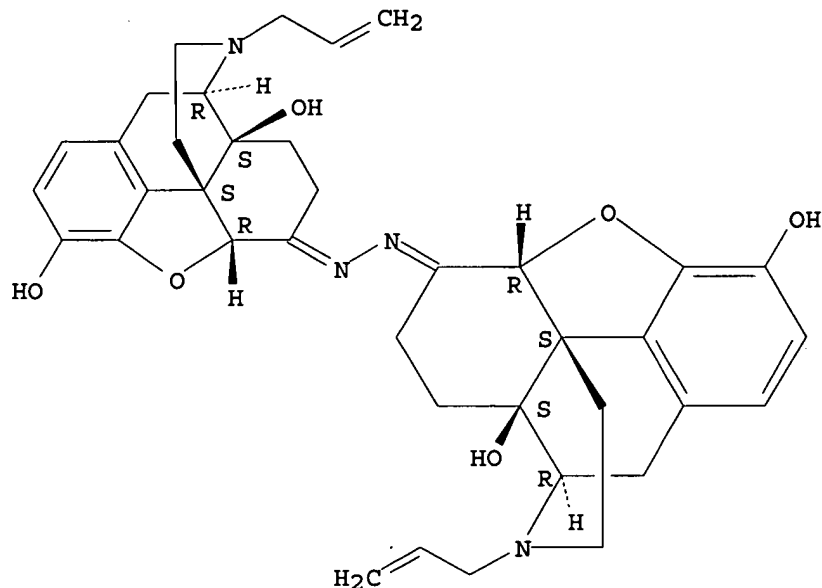
RN 583-91-5 HCAPLUS
 CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)

OH
 |
 MeS-CH₂-CH₂-CH-CO₂H

L45 ANSWER 35 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1985:143037 HCAPLUS
 DOCUMENT NUMBER: 102:143037
 TITLE: Separation of opioid analgesia from respiratory depression: evidence for different receptor mechanisms
 AUTHOR(S): Ling, Geoffrey S. F.; Spiegel, Katharyn; Lockhart, Stephen H.; Pasternak, Gavril W.
 CORPORATE SOURCE: Med. Coll., Cornell Univ., New York, NY, 10021, USA
 SOURCE: Journal of Pharmacology and Experimental Therapeutics (1985), 232(1), 149-55
 CODEN: JPETAB; ISSN: 0022-3565
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Pretreating rats 24 h earlier with naloxonazine [82824-01-9] (10 mg/kg, i.v.) virtually eliminates the analgesic response observed with morphine [57-27-2] at 3.5 mg/kg (i.v.) and significantly reduces the elevation in tail-flick latencies seen with higher morphine doses. Full dose-response curves show a 4-fold shift to the right following naloxonazine treatment. At 3.5 mg/kg (i.v.), morphine depresses respiratory function, as determined by arterial blood gas (pO₂, pCO₂ and pH) measurements. Unlike analgesia, prior treatment of rats with naloxonazine does not alter the respiratory depressant actions of morphine. This inability of naloxonazine to antagonize the respiratory depressant actions of morphine is supported by full dose-response curves. Thus, prior treatment of rats with the μ -1-selective antagonist naloxonazine selectively antagonizes analgesia without affecting respiratory depression, implying different receptor mechanisms for the analgesic and respiratory depressant effects of morphine. Further comparisons of the analgesic and respiratory depressant effects of morphine and 2 opioid peptides, metkephamid [66960-34-7] and D-Ala²-D-Leu⁵-enkephalin [63631-40-3], strongly suggest the involvement of μ -2 rather than δ mechanisms in opioid respiratory depression.
 IT 82824-01-9
 RL: BIOL (Biological study)
 (analgesia and respiratory depression from morphine response to)
 RN 82824-01-9 HCAPLUS
 CN Morphinan-6-one, 4,5-epoxy-3,14-dihydroxy-17-(2-propenyl)-,

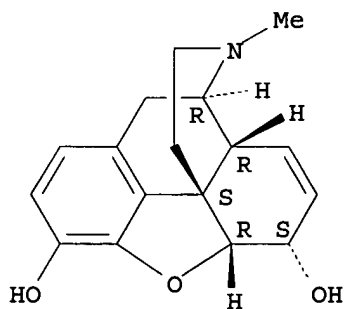
[(5 α)-4,5-epoxy-3,14-dihydroxy-17-(2-propenyl)morphinan-6-ylidene]hydrazone, (5 α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



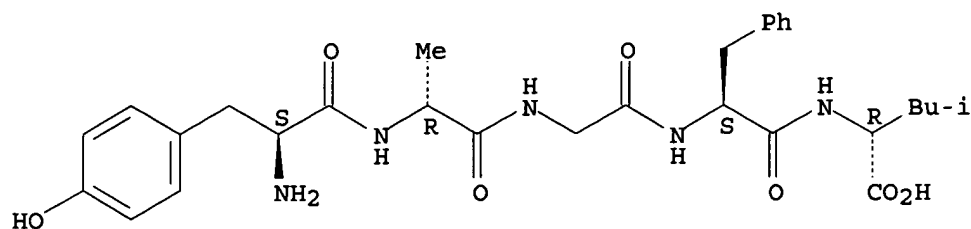
IT 57-27-2, biological studies 63631-40-3
66960-34-7
RL: BIOL (Biological study)
(analgesia and respiratory depression from, receptors in)
RN 57-27-2 HCAPLUS
CN Morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-methyl-
(5 α ,6 α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 63631-40-3 HCAPLUS
CN D-Leucine, L-tyrosyl-D-alanylglycyl-L-phenylalanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

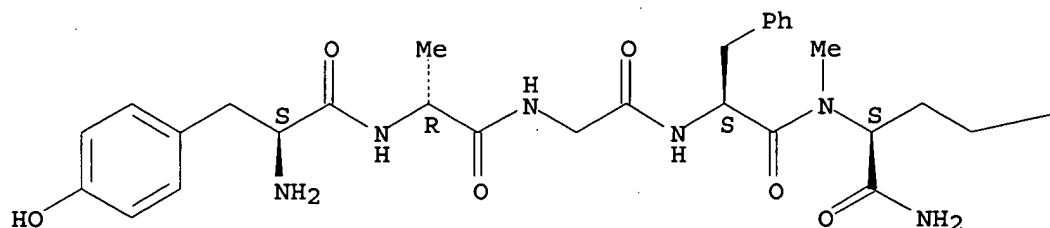


RN 66960-34-7 HCAPLUS

CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

— SMe

L45 ANSWER 36 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1984:604653 HCAPLUS

DOCUMENT NUMBER: 101:204653

TITLE: Metkephamid-induced Flehmen in lambs

AUTHOR(S): Donchin, Y.; De Vane, G. W.; Caton, D.

CORPORATE SOURCE: Coll. Med., Univ. Florida, Gainesville, FL, 32610, USA

SOURCE: Physiology & Behavior (1984), 33(2), 335-7

CODEN: PHBHA4; ISSN: 0031-9384

DOCUMENT TYPE: Journal

LANGUAGE: English

AB When metkephamid [66960-34-7], a systemically active analog of methionine-enkephalin, was administered intracisternally to male or female prepubescent lambs as early as the 1st week of life, a behavioral pattern akin to Flehmen, which is a well-characterized grimace displayed by mature ungulates during mating, was observed. This metkephamid-induced Flehmen was preceded by transient bradycardia and apnea followed by somnolence for approx. 1 h, during which Flehmen was observed intermittently. Pretreatment with the specific opiate antagonist, naloxone, blocked this behavioral response. Endogenous opioid peptides may be involved in Flehmen.

IT 66960-34-7

RL: BIOL (Biological study)

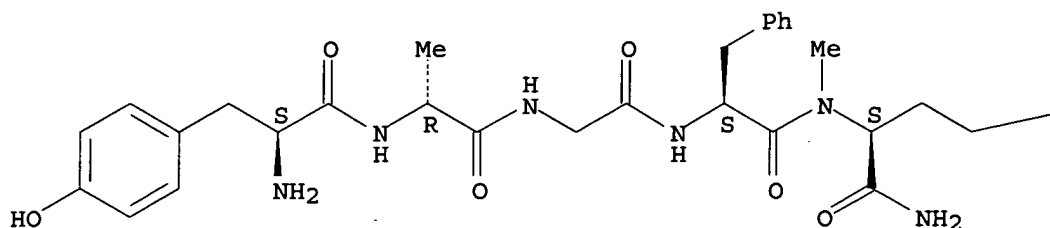
(Flehmen behavior response to intracisternal administration of, in
lamb)

RN 66960-34-7 HCAPLUS

CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

— SMe

L45 ANSWER 37 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1983:522843 HCAPLUS

DOCUMENT NUMBER: 99:122843

TITLE: Electron-spin resonance studies. Part 64. The hydroxyl radical-induced decarboxylation of methionine and some related compounds

AUTHOR(S): Davies, Michael J.; Gilbert, Bruce C.; Norman, Richard O. C.

CORPORATE SOURCE: Dep. Chem., Univ. York, York, YO1 5DD, UK

SOURCE: Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1972-1999) (1983), (5), 731-8

CODEN: JCPKBH; ISSN: 0300-9580

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Spin-trapping ESR expts. employing both MeNO2 (in conjunction with generation of •OH from the Ti(III)-H2O2 couple in a flow system) and Me3CNO (in conjunction with the **photolytic** decomposition of H2O2) confirm that the reaction of •OH with methionine, S-methylcysteine, and related compds. effects oxidative decarboxylation. The reaction proceeds via the sequential formation of an hydroxyl adduct at S, a S-centered radical-cation, and a cyclic sulfuranyl radical in which the carboxylate function becomes bonded to S.

IT 3352-57-6, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(decarboxylation by, of methionine and related compds., ESR study of)

RN 3352-57-6 HCAPLUS

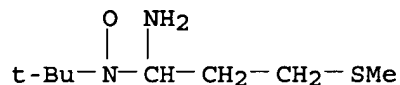
CN Hydroxyl (8CI, 9CI) (CA INDEX NAME)

HO

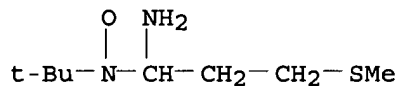
IT 87019-61-2P 87019-62-3P

RL: PREP (Preparation)
(formation and ESR of)

RN 87019-61-2 HCAPLUS

CN Nitroxide, 1-amino-3-(methylthio)propyl 1,1-dimethylethyl, conjugate
monoacid (9CI) (CA INDEX NAME)● H⁺

RN 87019-62-3 HCAPLUS

CN Nitroxide, 1-amino-3-(methylthio)propyl 1,1-dimethylethyl (9CI) (CA INDEX
NAME)

IT 63-68-3, reactions 583-91-5 1187-84-4

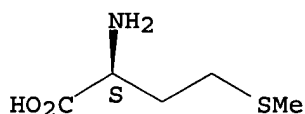
3082-77-7 4104-45-4 71057-15-3

RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidative decarboxylation of, hydroxyl-induced, ESR study of)

RN 63-68-3 HCAPLUS

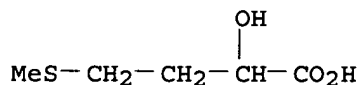
CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 583-91-5 HCAPLUS

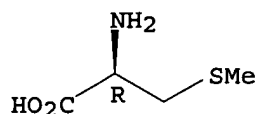
CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



RN 1187-84-4 HCAPLUS

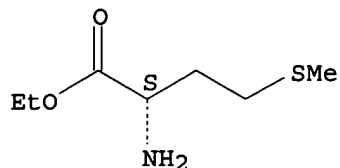
CN L-Cysteine, S-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

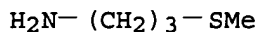


RN 3082-77-7 HCAPLUS
CN L-Methionine, ethyl ester (9CI) (CA INDEX NAME)

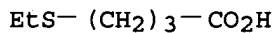
Absolute stereochemistry.



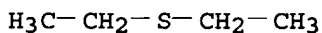
RN 4104-45-4 HCAPLUS
CN 1-Propanamine, 3-(methylthio)- (9CI) (CA INDEX NAME)



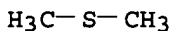
RN 71057-15-3 HCAPLUS
CN Butanoic acid, 4-(ethylthio)- (9CI) (CA INDEX NAME)



IT 352-93-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of Et carboxylate and glycine by hydroxyl in presence of, ESR
in relation to)
RN 352-93-2 HCAPLUS
CN Ethane, 1,1'-thiobis- (9CI) (CA INDEX NAME)

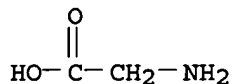


IT 75-18-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of butylamine by hydroxyl presence of, ESR in relation to)
RN 75-18-3 HCAPLUS
CN Methane, thiobis- (9CI) (CA INDEX NAME)



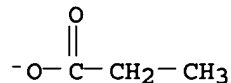
IT 56-40-6, reactions 72-03-7, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of, by hydroxyl, in presence of di-Et sulfide, ESR in relation
to)
RN 56-40-6 HCAPLUS

CN Glycine (8CI, 9CI) (CA INDEX NAME)



RN 72-03-7 HCAPLUS

CN Propanoic acid, ion(1-) (9CI) (CA INDEX NAME)



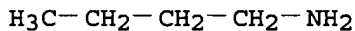
IT 109-73-9, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(oxidation of, by hydroxyl, in presence of di-Me sulfide, ESR in relation to)

RN 109-73-9 HCAPLUS

CN 1-Butanamine (9CI) (CA INDEX NAME)



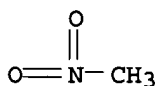
IT 75-52-5, properties

RL: PRP (Properties)

(spin trapping by, in reactions of hydroxyl with methionine and related compds.)

RN 75-52-5 HCAPLUS

CN Methane, nitro- (8CI, 9CI) (CA INDEX NAME)



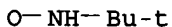
IT 22665-15-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(spin trapping by, in reactions of hydroxyl with methionine and related compds.)

RN 22665-15-2 HCAPLUS

CN Nitroxide, 1,1-dimethylethyl (9CI) (CA INDEX NAME)



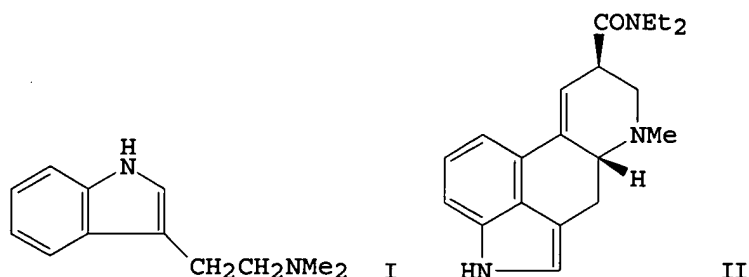
L45 ANSWER 38 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1983:515932 HCAPLUS

DOCUMENT NUMBER: 99:115932

TITLE: Interaction of synthetic opioid metenkephalin peptide analogs, Lilly 127623 and FK 33-824 with indole hallucinogens: antagonism of N,N-dimethyltryptamine- and LSD-induced disruption of food-rewarded bar

pressing behavior in the rat
 AUTHOR(S): Ruffing, Diane M.; Domino, Edward F.
 CORPORATE SOURCE: Div. Pharm., Lafayette Clin., Detroit, MI, 48207, USA
 SOURCE: Psychopharmacology (Berlin, Germany) (1983), 80(4),
 315-18
 CODEN: PSCHDL; ISSN: 0033-3158
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI



AB The synthetic peptide analogs LY 127623 [66960-34-7] and FK 33-824 [64854-64-4] were tested for behavioral dose effects and potential interaction with DMT (I) [61-50-7] and LSD (II) [50-37-3] in adult male rats trained on a pos. reinforcement fixed-ratio 4 (FR-4) behavioral bar pressing schedule (a reward of 0.01 mL sugar-sweetened evaporated milk was earned on every 4th bar press). DMT (3.2 mg/kg) and LSD (0.1 mg/kg), administered i.p. following a 0.9% NaCl 15-20-min control pretreatment, disrupted established food-rewarded FR-4 bar pressing in a consistent and reproducible manner. Animals pretreated i.p. with predetd. behaviorally noneffective doses of LY 127623 (0.01-0.32 mg/kg) and FK 33-824 (0.001-0.01 mg/kg) 15-20 min prior to receiving DMT demonstrated antagonism to DMT-induced disruption of FR-4 bar pressing, whereas doses of 0.10-0.32 mg/kg LY 127623 and 0.00032-0.0032 mg/kg FK 33-824 antagonized LSD-induced behavioral effects. The data obtained substantiate important interactions of indole hallucinogens with opioids and strengthen the evidence for involvement of endogenous opioids in the pathogenesis of psychoses.

IT 50-37-3 61-50-7

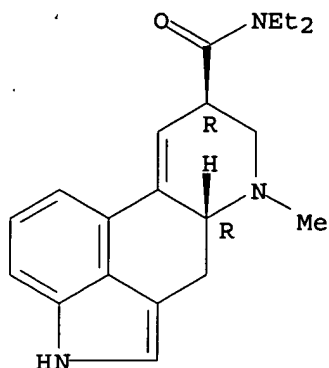
RL: PRP (Properties)

(behavioral effects of, opioids in relation to)

RN 50-37-3 HCAPLUS

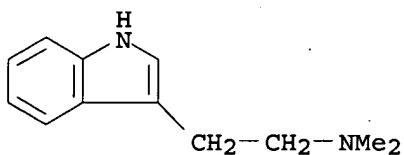
CN Ergoline-8-carboxamide, 9,10-didehydro-N,N-diethyl-6-methyl-, (8β)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 61-50-7 HCAPLUS

CN 1H-Indole-3-ethanamine, N,N-dimethyl- (9CI) (CA INDEX NAME)



IT 64854-64-4 66960-34-7

RL: BIOL (Biological study)

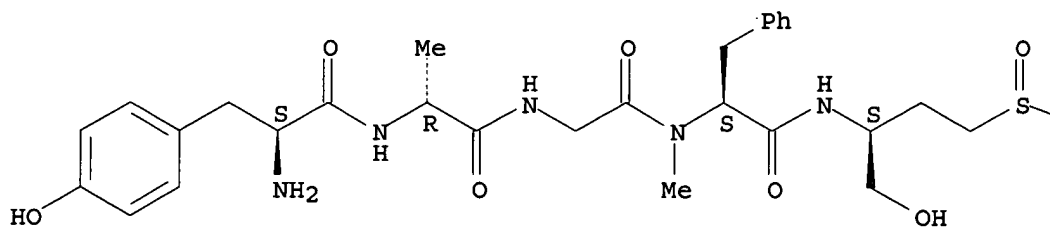
(operant behavior response to DMT and LSD antagonism by)

RN 64854-64-4 HCAPLUS

CN L-Phenylalaninamide, L-tyrosyl-D-alanylglycyl-N-[(1S)-1-(hydroxymethyl)-3-(methylsulfinyl)propyl]-Nα-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

Me

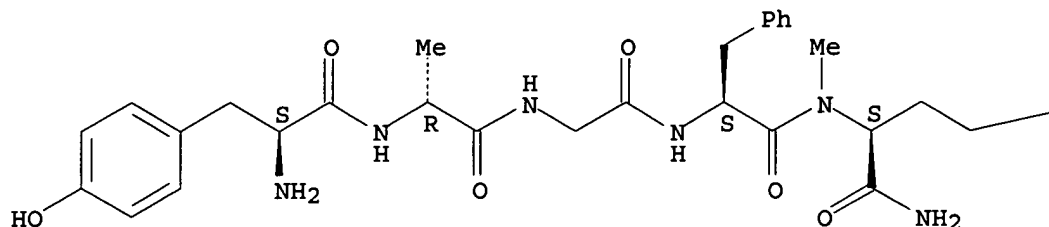
RN 66960-34-7 HCAPLUS

CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI)

(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

—SMe

L45 ANSWER 39 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1981:478882 HCAPLUS

DOCUMENT NUMBER: 95:78882

TITLE: Influence of ration composition and energy balance on blood β -hydroxybutyrate (ketone) and plasma glucose concentrations of dairy cows in **early** lactation

AUTHOR(S): Herdt, T. H.; Stevens, J. B.; Linn, J.; Larson, V.

CORPORATE SOURCE: Dep. Large Anim. Clin. Sci., Univ. Minnesota, St. Paul, MN, 55108, USA

SOURCE: American Journal of Veterinary Research (1981), 42(7), 1177-80

CODEN: AJVRAH; ISSN: 0002-9645

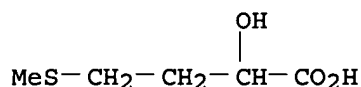
DOCUMENT TYPE: Journal

LANGUAGE: English

AB The effect of ratio composition, with respect to concentrate, crude protein, and

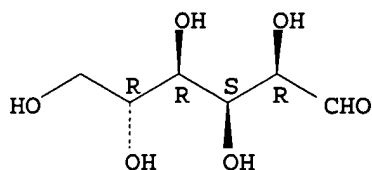
methionine hydroxy analog [583-91-5] content, on blood β -hydroxybutyrate [300-85-6] and plasma glucose [50-99-7] concns. was assessed in Holstein cows every 2 wk over the first 6 wk of lactation. The correlation of these metabolites with estimated energy balance, and the effects of these ration variables on this correlation were studied. High concentrate diets (60% of dry matter) compared with low concentrate diets (40% of dry matter) increased mean plasma glucose values and reduced mean blood β -hydroxybutyrate concentration. Variation in crude protein and methionine hydroxy analog supplementation did not affect metabolite concentration. The correlations between blood β -hydroxybutyrate and energy balance and between plasma glucose and energy balance were weak and subject to the influence of variation in ration composition. Plasma glucose and blood β -hydroxybutyrate concns. cannot be used as valid indicators of energy balance. However, it did appear that blood β -hydroxybutyrate might be used as an indicator of the relative glucogenic potential of dairy rations and that blood concns. of this metabolite could potentially be used to adjust factors in the ration which influence glucose availability to the cow.

IT 583-91-5
 RL: BIOL (Biological study)
 (blood β -hydroxybutyrate and plasma glucose of dairy cows in
 relation to dietary)
 RN 583-91-5 HCAPLUS
 CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)

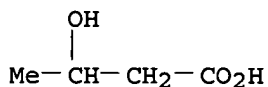


IT 50-99-7, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (metabolism of, by cows, feed composition effect on)
 RN 50-99-7 HCAPLUS
 CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 300-85-6
 RL: BIOL (Biological study)
 (of blood, of dairy cows, feed composition effect on)
 RN 300-85-6 HCAPLUS
 CN Butanoic acid, 3-hydroxy- (9CI) (CA INDEX NAME)



L45 ANSWER 40 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1981:58146 HCAPLUS
 DOCUMENT NUMBER: 94:58146
 TITLE: Actions of mu, kappa, sigma, delta and
 agonist/antagonist opiates on striatal dopaminergic
 function
 AUTHOR(S): Wood, Paul L.; Stotland, M.; Richard, J. W.; Rackham,
 A.
 CORPORATE SOURCE: Dep. Pharmacol., Merck Frosst Lab., Pointe
 Claire-Dorval, QC, Can.
 SOURCE: Journal of Pharmacology and Experimental Therapeutics
 (1980), 215(3), 697-703
 CODEN: JPETAB; ISSN: 0022-3565
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB In the rat, the mu agonists morphine sulfate [64-31-3],
 etorphine [14521-96-1], methadone [76-99-3], and

phenazocine [127-35-5] and the delta agonist D-Ala2-D-Leu5 enkephalin [63631-40-3] all produced dose-dependent elevations in the dopamine (DA) [51-61-6] metabolites dihydroxyphenylacetic acid [102-32-9] and homovanillic acid (HVA) [306-08-1] with no increase in 3-methoxytyramine [554-52-9]. However, in the mouse, concomitant increases in HVA and 3-methoxytyramine were noted. The basis for this biochem. species difference in the coupling of intraneuronal metabolism and DA release remains to be determined. The epsilon agonist, β -endorphin [60617-12-1], also elevated striatal dihydroxyphenylacetic acid and HVA indicating the possible coexistence of these receptors with mu and delta receptors on nigrostriatal neurons. In contrast, expts. with the kappa agonists ketazocine [36292-69-0], ethylketazocine [36292-66-7], and MR2034 [57236-85-8] indicate the absence of kappa receptors on these neurons. Although the sigma agonist SKF 10047 [14198-28-8] did alter DA metabolism, this action did not appear to involve opiate receptors. The agonist/antagonist analgesics which possess multiple receptor affinities were found to elevate DA metabolites at low doses, with this action reversing at higher doses in which antagonistic activity prevails. The agonist action of these agents on DA metabolism does not appear to be mu or kappa receptor mediated and may therefore involve delta or epsilon receptors. Thus, a role for multiple opiate receptors in the regulation of nigrostriatal dopaminergic function is indicated but kappa receptors are not involved. A sensitive gas chromatog.-mass fragmentog. assay was established for the simultaneous measurement of dihydroxyphenylacetic acid, HVA, DA, and 3-methoxytyramine.

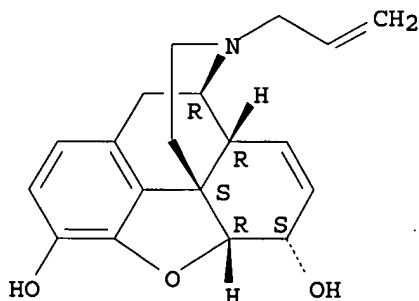
IT 62-67-9 64-31-3 76-99-3 127-35-5
359-83-1 465-65-6 3572-80-3 14198-28-8
14521-96-1 20594-83-6 36292-66-7
36292-69-0 42408-82-2 54340-58-8
57236-85-8 60617-12-1 63631-40-3
64854-64-4 66960-34-7 76416-45-0

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(dopamine metabolism by brain response to)

RN 62-67-9 HCAPLUS

CN Morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-(2-propenyl)-,
(5 α ,6 α)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

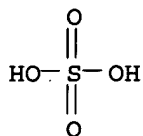


RN 64-31-3 HCAPLUS

CN Morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-methyl-
(5 α ,6 α)-, sulfate (2:1) (salt) (9CI) (CA INDEX NAME)

CM 1

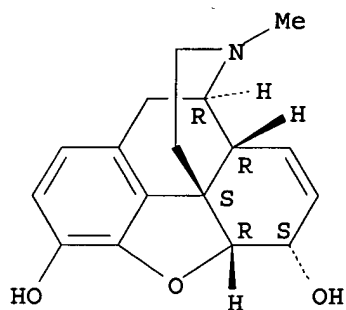
CRN 7664-93-9
CMF H2 O4 S



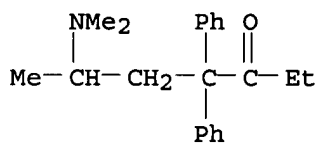
CM 2

CRN 57-27-2
CMF C17 H19 N O3

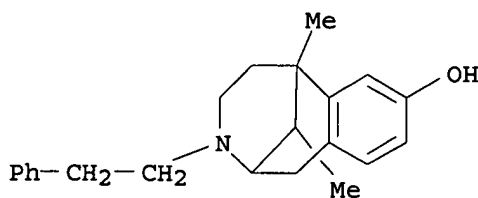
Absolute stereochemistry. Rotation (-).



RN 76-99-3 HCAPLUS
CN 3-Heptanone, 6-(dimethylamino)-4,4-diphenyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



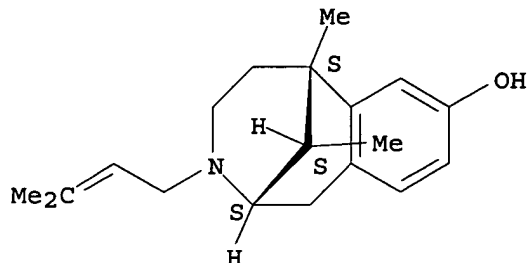
RN 127-35-5 HCAPLUS
CN 2,6-Methano-3-benzazocin-8-ol, 1,2,3,4,5,6-hexahydro-6,11-dimethyl-3-(2-phenylethyl)- (9CI) (CA INDEX NAME)



RN 359-83-1 HCAPLUS

CN 2,6-Methano-3-benzazocin-8-ol, 1,2,3,4,5,6-hexahydro-6,11-dimethyl-3-(3-methyl-2-butenyl)-, (2R,6R,11R)-rel- (9CI) (CA INDEX NAME)

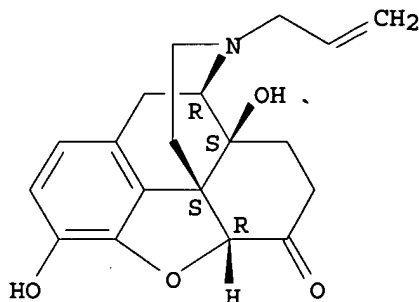
Relative stereochemistry.
Currently available stereo shown.



RN 465-65-6 HCAPLUS

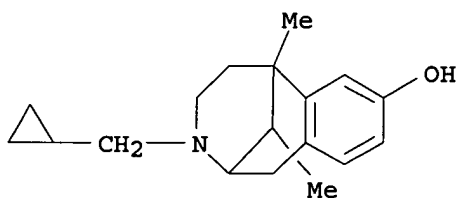
CN Morphinan-6-one, 4,5-epoxy-3,14-dihydroxy-17-(2-propenyl)-, (5α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 3572-80-3 HCAPLUS

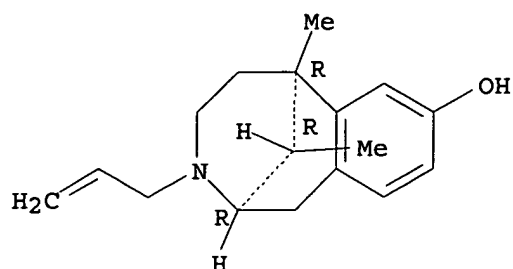
CN 2,6-Methano-3-benzazocin-8-ol, 3-(cyclopropylmethyl)-1,2,3,4,5,6-hexahydro-6,11-dimethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 14198-28-8 HCAPLUS

CN 2,6-Methano-3-benzazocin-8-ol, 1,2,3,4,5,6-hexahydro-6,11-dimethyl-3-(2-propenyl)-, (2R,6R,11R)- (9CI) (CA INDEX NAME)

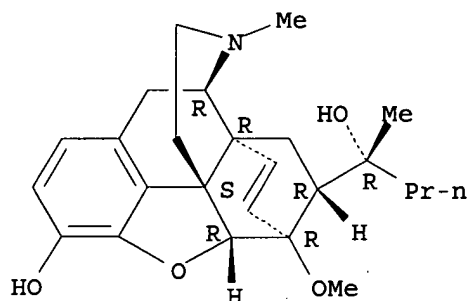
Absolute stereochemistry. Rotation (-).



RN 14521-96-1 HCAPLUS

CN 6,14-Ethenomorphinan-7-methanol, 4,5-epoxy-3-hydroxy-6-methoxy- α ,17-dimethyl- α -propyl-, (α R,5 α ,7 α) - (9CI) (CA INDEX NAME)

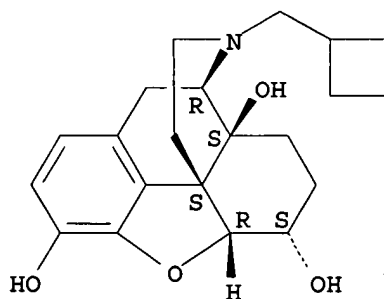
Absolute stereochemistry.



RN 20594-83-6 HCAPLUS

CN Morphinan-3,6,14-triol, 17-(cyclobutylmethyl)-4,5-epoxy-, (5 α ,6 α) - (9CI) (CA INDEX NAME)

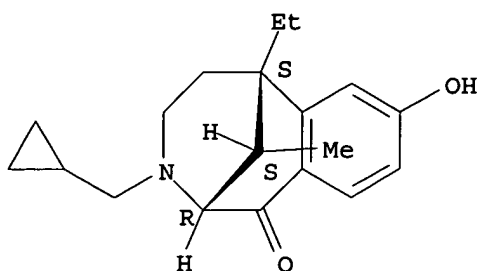
Absolute stereochemistry.



RN 36292-66-7 HCAPLUS

CN 2,6-Methano-3-benzazocin-1(2H)-one, 3-(cyclopropylmethyl)-6-ethyl-3,4,5,6-tetrahydro-8-hydroxy-11-methyl-, (2R,6S,11S)-rel- (9CI) (CA INDEX NAME)

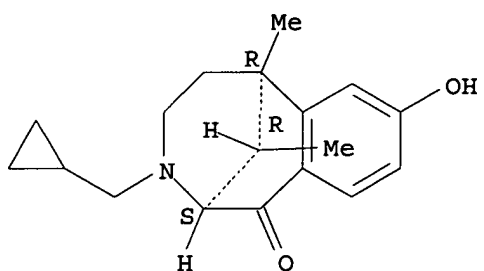
Relative stereochemistry.



RN 36292-69-0 HCAPLUS

CN 2,6-Methano-3-benzazocin-1(2H)-one, 3-(cyclopropylmethyl)-3,4,5,6-tetrahydro-8-hydroxy-6,11-dimethyl-, (2S,6R,11R)- (9CI) (CA INDEX NAME)

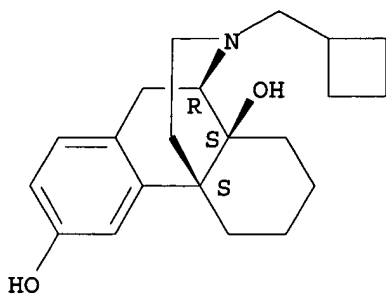
Absolute stereochemistry.



RN 42408-82-2 HCAPLUS

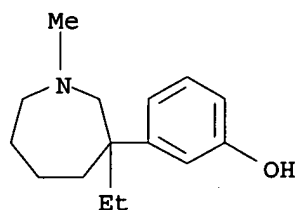
CN Morphinan-3,14-diol, 17-(cyclobutylmethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 54340-58-8 HCAPLUS

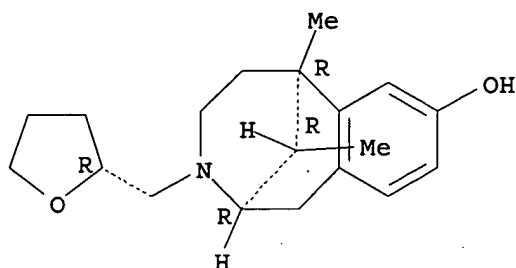
CN Phenol, 3-(3-ethylhexahydro-1-methyl-1H-azepin-3-yl)- (9CI) (CA INDEX NAME)



RN 57236-85-8 HCAPLUS

CN 2,6-Methano-3-benzazocin-8-ol, 1,2,3,4,5,6-hexahydro-6,11-dimethyl-3-[[2R]-tetrahydro-2-furanyl]methyl]-, (2R,6R,11R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 60617-12-1 HCAPLUS

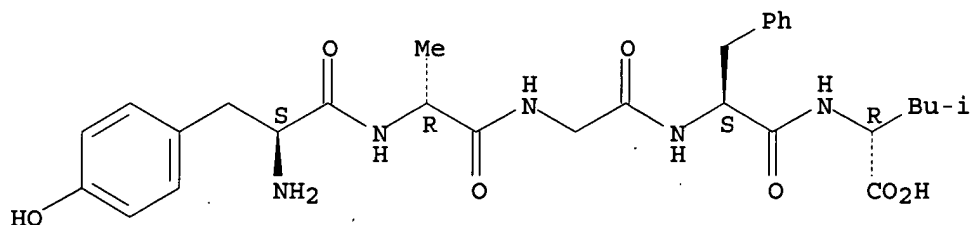
CN β -Endorphin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 63631-40-3 HCAPLUS

CN D-Leucine, L-tyrosyl-D-alanylglycyl-L-phenylalanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

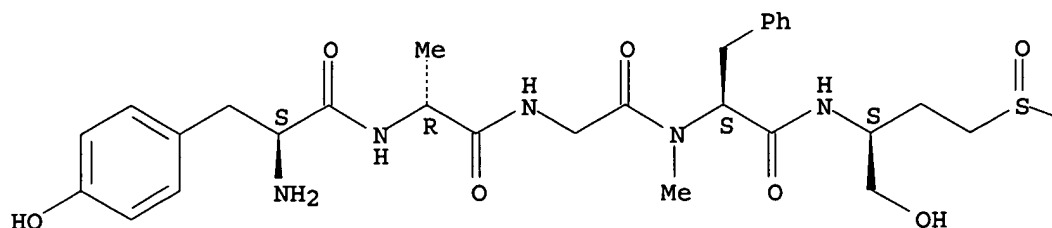


RN 64854-64-4 HCAPLUS

CN L-Phenylalaninamide, L-tyrosyl-D-alanylglycyl-N-[(1S)-1-(hydroxymethyl)-3-(methylsulfinyl)propyl]-N-alpha-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



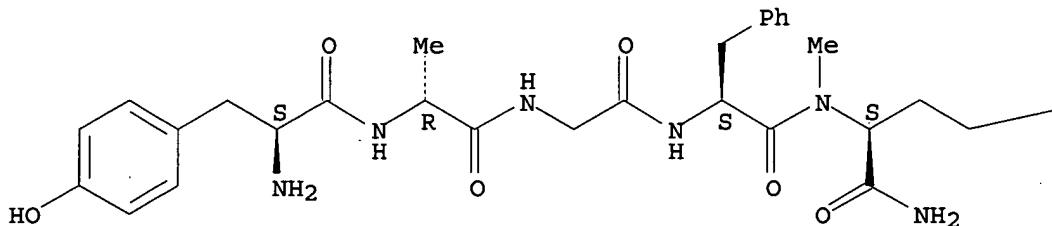
PAGE 1-B

— Me

RN 66960-34-7 HCAPLUS
 CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI)
 (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

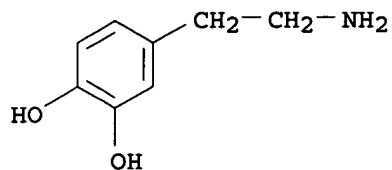
— SMe

RN 76416-45-0 HCAPLUS
 CN MK 901 (9CI) (CA INDEX NAME)

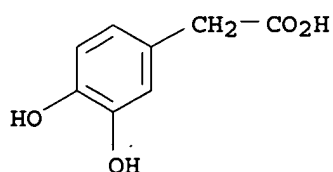
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 51-61-6, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (metabolism of, by brain, opiate receptor agonist effect on)

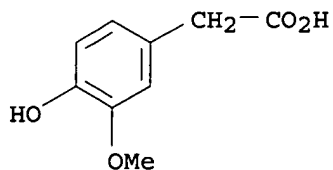
RN 51-61-6 HCAPLUS
 CN 1,2-Benzenediol, 4-(2-aminoethyl)- (9CI) (CA INDEX NAME)



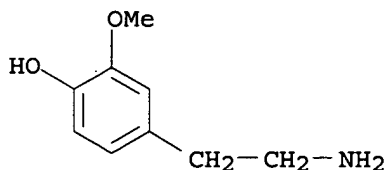
IT 102-32-9 306-08-1 554-52-9
 RL: BIOL (Biological study)
 (of brain, opiate receptor agonist effect on dopamine metabolism in
 relation to)
 RN 102-32-9 HCAPLUS
 CN Benzeneacetic acid, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



RN 306-08-1 HCAPLUS
 CN Benzeneacetic acid, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



RN 554-52-9 HCAPLUS
 CN Phenol, 4-(2-aminoethyl)-2-methoxy- (8CI, 9CI) (CA INDEX NAME)



L45 ANSWER 41 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1981:41276 HCAPLUS
 DOCUMENT NUMBER: 94:41276
 TITLE: Actions of enkephalin, μ , and partial agonist
 analgesics on acetylcholine turnover in rat brain
 AUTHOR(S): Wood, P. L.; Stotland, L. M.
 CORPORATE SOURCE: Dep. Pharmacol., Merck Frosst Lab., Pointe
 Claire-Dorval, QC, Can.
 SOURCE: Neuropharmacology (1980), 19(10), 975-82
 CODEN: NEPHBW; ISSN: 0028-3908
 DOCUMENT TYPE: Journal

LANGUAGE: English

AB μ Agonists and enkephalin analogs suppressed acetylcholine [51-84-3] turnover rate in rat parietal cortex and hippocampus, but not in the striatum or frontal cortex. Partial agonists (κ agonists, μ antagonists) did not alter hippocampal acetylcholine turnover, suggesting that septal hippocampal cholinergic **neurons** do not possess κ receptors and/or are not regulated by **neurons** bearing κ receptors. These data, along with those of T. L. Yaksh and T. A. Rudy (1978) indicate that κ receptor mediated analgesia may involve different neural substrates from those of μ agonists and supports the concept of multiple opiate receptors within the central nervous system.

IT 64-31-3 76-99-3 359-83-1 465-65-6
3572-80-3 14521-96-1 42408-82-2
61090-95-7 63631-40-3 64854-64-4
65189-64-2 66960-34-7

RL: BIOL (Biological study)

(acetylcholine metabolism by brain response to, κ receptors in relation to)

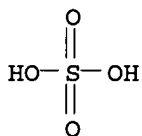
RN 64-31-3 HCAPLUS

CN Morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-methyl-(5 α ,6 α)-, sulfate (2:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 7664-93-9

CMF H2 O4 S

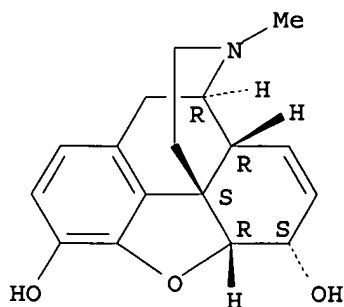


CM 2

CRN 57-27-2

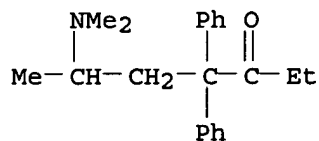
CMF C17 H19 N O3

Absolute stereochemistry. Rotation (-).



RN 76-99-3 HCAPLUS

CN 3-Heptanone, 6-(dimethylamino)-4,4-diphenyl- (7CI, 8CI, 9CI) (CA INDEX NAME)

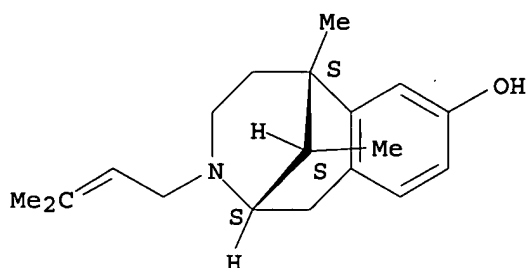


RN 359-83-1 HCAPLUS

CN 2,6-Methano-3-benzazocin-8-ol, 1,2,3,4,5,6-hexahydro-6,11-dimethyl-3-(3-methyl-2-butenyl)-, (2R,6R,11R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

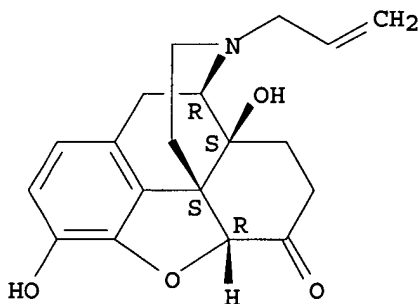
Currently available stereo shown.



RN 465-65-6 HCAPLUS

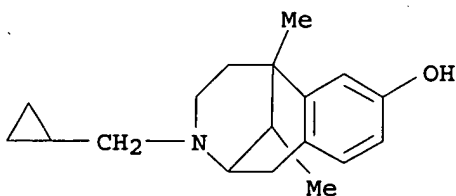
CN Morphinan-6-one, 4,5-epoxy-3,14-dihydroxy-17-(2-propenyl)-, (5α)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



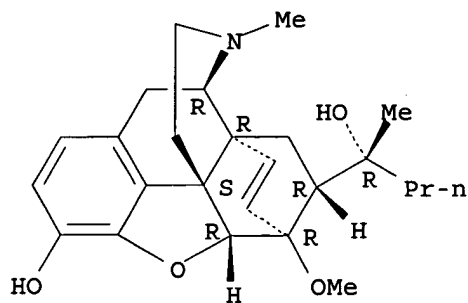
RN 3572-80-3 HCAPLUS

CN 2,6-Methano-3-benzazocin-8-ol, 3-(cyclopropylmethyl)-1,2,3,4,5,6-hexahydro-6,11-dimethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



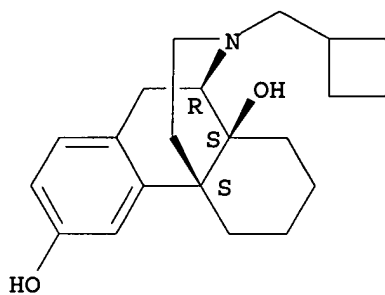
RN 14521-96-1 HCAPLUS
 CN 6,14-Ethenomorphinan-7-methanol, 4,5-epoxy-3-hydroxy-6-methoxy- α ,17-dimethyl- α -propyl-, (α R,5 α ,7 α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 42408-82-2 HCAPLUS
 CN Morphinan-3,14-diol, 17-(cyclobutylmethyl)- (9CI) (CA INDEX NAME)

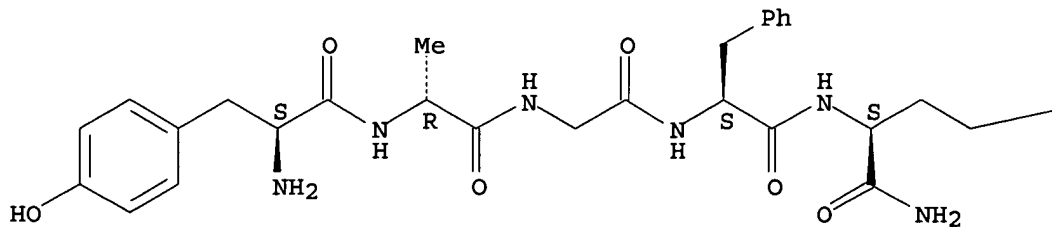
Absolute stereochemistry.



RN 61090-95-7 HCAPLUS
 CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



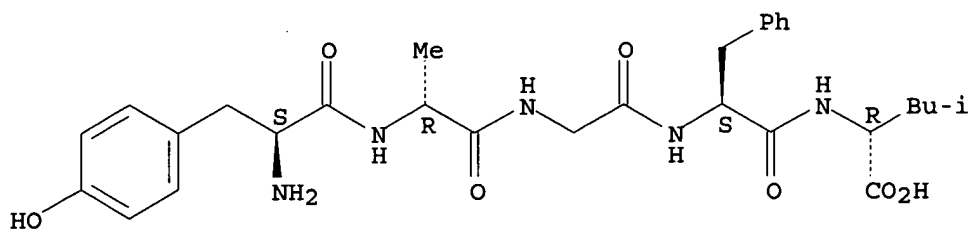
PAGE 1-B

—SMe

RN 63631-40-3 HCAPLUS

CN D-Leucine, L-tyrosyl-D-alanylglycyl-L-phenylalanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

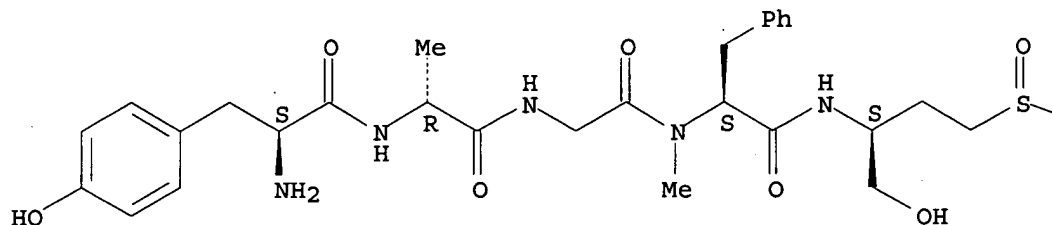


RN 64854-64-4 HCAPLUS

CN L-Phenylalaninamide, L-tyrosyl-D-alanylglycyl-N-[(1S)-1-(hydroxymethyl)-3-(methylsulfinyl)propyl]-N α -methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



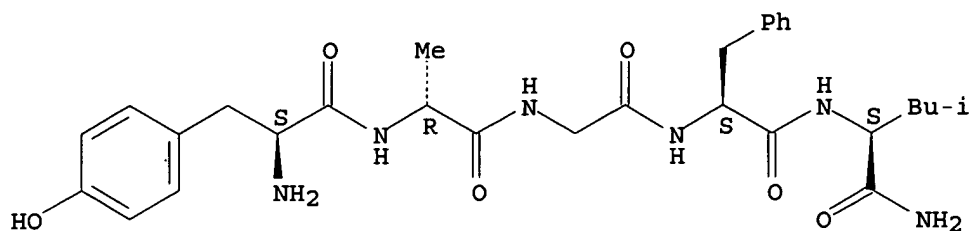
PAGE 1-B

—Me

RN 65189-64-2 HCAPLUS

CN L-Leucinamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

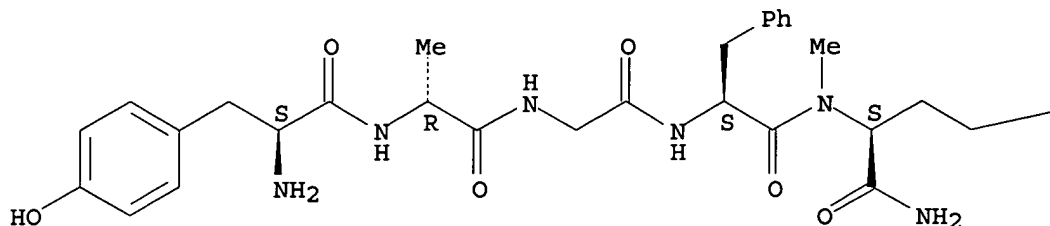


RN 66960-34-7 HCAPLUS

CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

—SMe

IT 51-84-3, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
(Biological study); PROC (Process)
(metabolism of, by brain, enkephalins and opiates effects on, κ
receptors in relation to)

RN 51-84-3 HCAPLUS

CN Ethanaminium, 2-(acetyloxy)-N,N,N-trimethyl- (9CI) (CA INDEX NAME)

 $\text{Me}_3^+\text{N}-\text{CH}_2-\text{CH}_2-\text{OAc}$

L45 ANSWER 42 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1981:11282 HCAPLUS

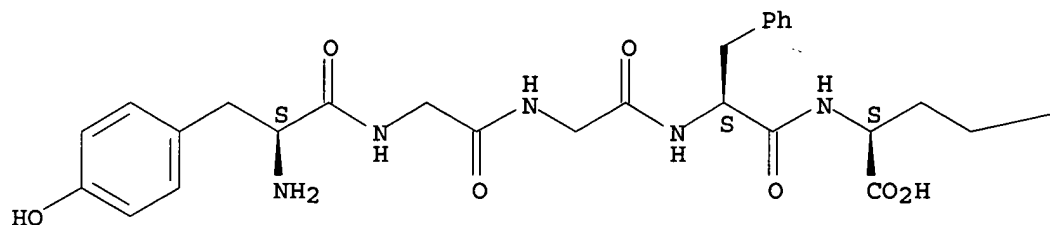
DOCUMENT NUMBER: 94:11282

TITLE: Opioid peptides as brain neurotransmitters
with therapeutic potential: basic and clinical
studiesAUTHOR(S): Frederickson, Robert C. A.; Smithwick, Edward L.;
Henry, David P.CORPORATE SOURCE: Lilly Res. Lab., Eli Lilly and Co., Indianapolis, IN,
46285, USA

CN 1-5-Adrenorphin (human) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



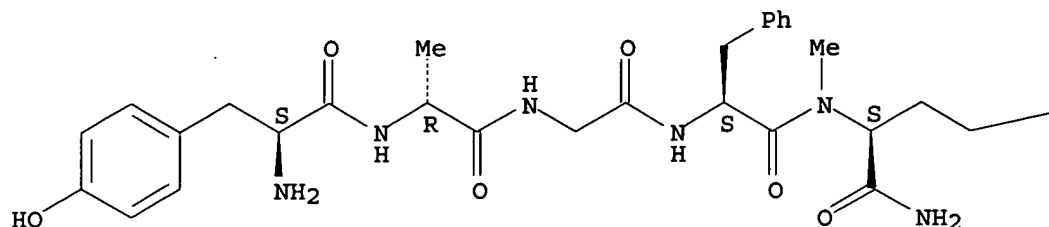
PAGE 1-B

 —SMe

CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

— SMe

IT 9002-62-4, biological studies 9002-72-6
 RL: BIOL (Biological study)
 (of blood serum, enkephalins effect on, analgesia in relation to)
 RN 9002-62-4 HCAPLUS
 CN Prolactin (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9002-72-6 HCAPLUS
 CN Somatotropin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L45 ANSWER 43 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1979:517587 HCAPLUS

DOCUMENT NUMBER: 91:117587

TITLE: Evidence for tonic activity of enkephalins in brain and development of systemically active analogs with clinical potential

AUTHOR(S): Frederickson, Robert C. A.; Smithwick, Edward L., Jr.
 CORPORATE SOURCE: Lilly Res. Lab., Eli Lilly and Co., Indianapolis, IN, 46206, USA

SOURCE: Endorphins Ment. Health Res., [Conf.] (1979), Meeting Date 1977, 352-65. Editor(s): Usdin, Earl; Bunney, William E.; Kline, Nathan S. Oxford Univ. Press: New York, N. Y.
 CODEN: 40WCA2

DOCUMENT TYPE: Conference

LANGUAGE: English

AB The relative analgesic potencies of several narcotic analgesics and several enkephalin analogs in the mouse hot plate and writhing tests is given. The time course of the analgesic activity of Tyr-D-Ala-Gly-Phe-N(CH₃)Met-CONH₂ (I) [66960-34-7] was shorter than that of morphine [57-27-2] but very similar to the duration of activity of equimolar doses of meperidine [57-42-1] or pentazocine [359-83-1]. In 1 test for phys. dependence liability morphine produced a high level of dependence, and meperidine and pentazocine an intermediate level of dependence whereas the response to I resembled that to saline in controls. In a 2nd experiment I did produce some withdrawal but this was much less than that produced by codeine [76-57-3]. No tolerance in the mouse writhing test was observed for I after chronic

treatment whereas tolerance to morphine and pentazocine were observed I also had **neuroleptic** activity in mice. Small opioid peptides may have important physiol. roles.

IT 57-27-2, biological studies 57-42-1 359-83-1

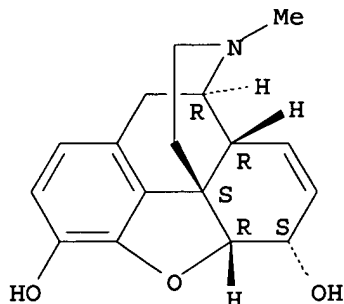
RL: BIOL (Biological study)

(analgesia from, enkephalin compared to)

RN 57-27-2 HCAPLUS

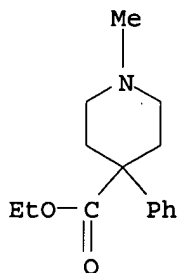
CN Morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-methyl-
(5 α ,6 α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 57-42-1 HCAPLUS

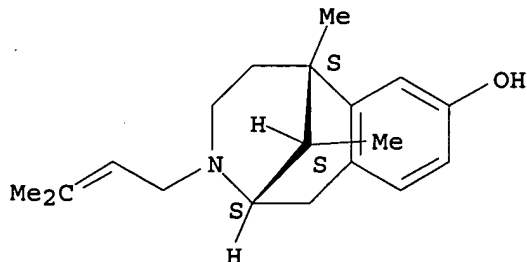
CN 4-Piperidinecarboxylic acid, 1-methyl-4-phenyl-, ethyl ester (9CI) (CA INDEX NAME)



RN 359-83-1 HCAPLUS

CN 2,6-Methano-3-benzazocin-8-ol, 1,2,3,4,5,6-hexahydro-6,11-dimethyl-3-(3-methyl-2-butenyl)-, (2R,6R,11R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Currently available stereo shown.



IT 58569-55-4 60117-17-1 60117-24-0
 60617-12-1 61090-95-7 65189-64-2
 66609-15-2 66609-25-4 66960-34-7

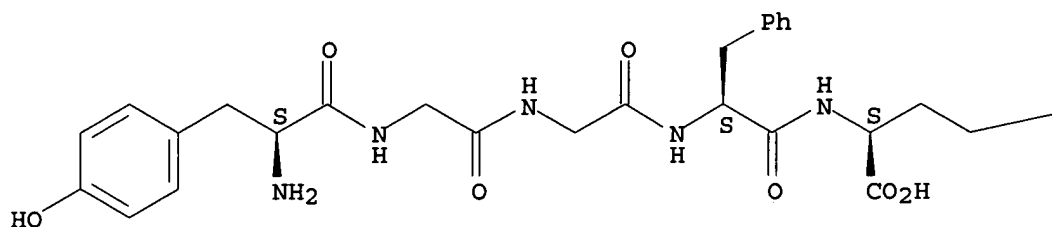
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
 (analgesic activity of)

RN 58569-55-4 HCAPLUS

CN 1-5-Adrenorphin (human) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

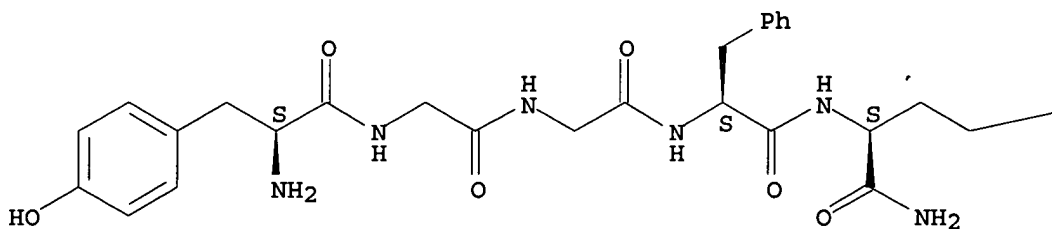
—SMe

RN 60117-17-1 HCAPLUS

CN L-Methioninamide, L-tyrosylglycylglycyl-L-phenylalanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

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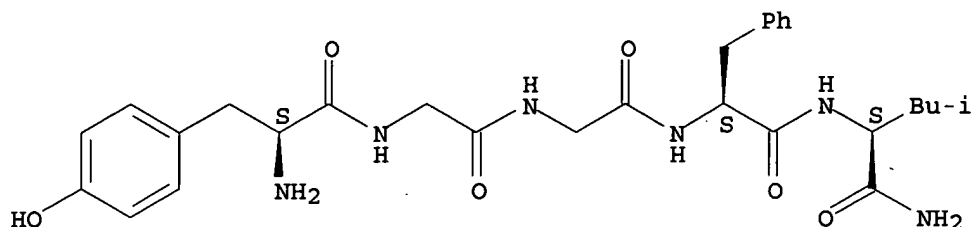
PAGE 1-B

—SMe

RN 60117-24-0 HCAPLUS

CN 1-5-β-Neoendorphin (human), 5-L-leucinamide- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



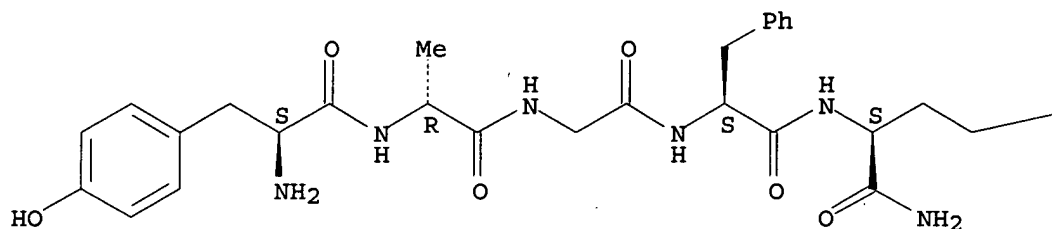
RN 60617-12-1 HCAPLUS
CN β -Endorphin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 61090-95-7 HCAPLUS
CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

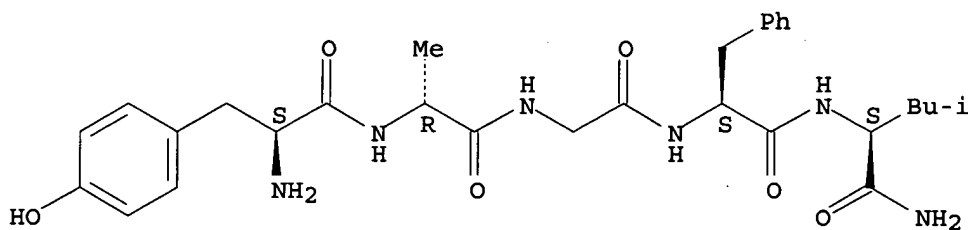


PAGE 1-B

—SMe

RN 65189-64-2 HCAPLUS
CN L-Leucinamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl- (9CI) (CA INDEX NAME)

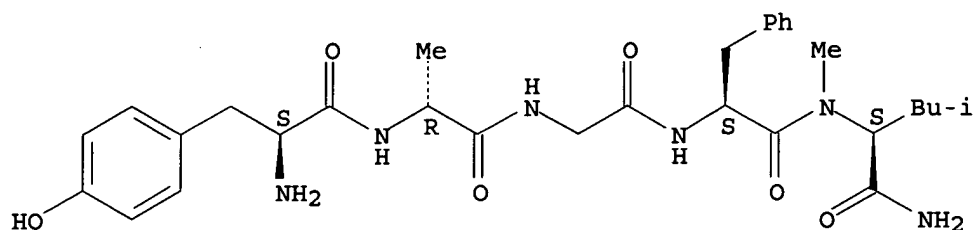
Absolute stereochemistry.



RN 66609-15-2 HCAPLUS
CN L-Leucinamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI)

(CA INDEX NAME)

Absolute stereochemistry.

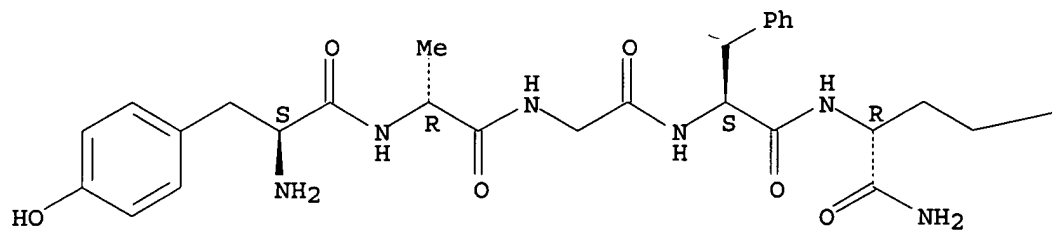


RN 66609-25-4 HCAPLUS

CN D-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

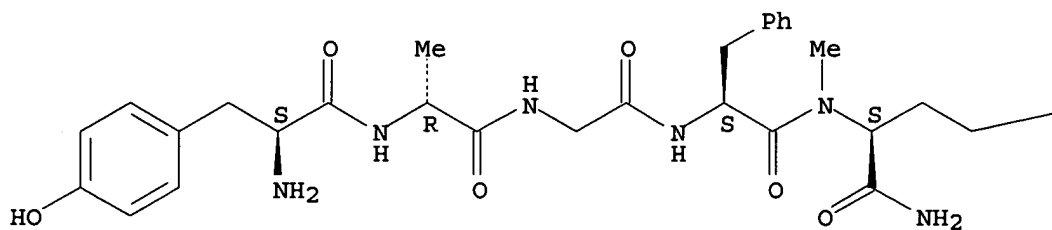
— SMe

RN 66960-34-7 HCAPLUS

CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

— SMe

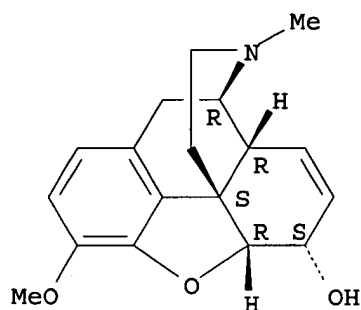
IT 76-57-3

RL: BIOL (Biological study)
(phys. dependence on, enkephalin compared to)

RN 76-57-3 HCAPLUS

CN Morphinan-6-ol, 7,8-didehydro-4,5-epoxy-3-methoxy-17-methyl-,
(5 α ,6 α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L45 ANSWER 44 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1978:103738 HCAPLUS

DOCUMENT NUMBER: 88:103738

TITLE: The use of whole barley diets fortified with solutions
of urea, minerals and vitamins for lambs

AUTHOR(S): Oerskov, E. R.; Grubb, D. A.

CORPORATE SOURCE: Rowett Res. Inst., Bucksburn/Aberdeen, UK

SOURCE: Animal Feed Science and Technology (1977), 2(4),
307-14

CODEN: AFSTDH; ISSN: 0377-8401

DOCUMENT TYPE: Journal

LANGUAGE: English

AB For 1 experiment 45 early-weaned lambs were given one of the following 5 diets from weaning to slaughter: (1) whole barley with urea [57-13-6], minerals, and vitamins added as a concentrated solution; (2) as diet (1) plus 4 g/kg of Na₂SO₄ in solution; (3) as diet (2) plus 1.2 g of methionine hydroxy analog (MHA) [583-91-5]/kg; (4) as diet (2) plus 2.5 mL of 40% CH₂O added per kg; (5) a control diet containing whole barley and 100 g/kg of a pelleted supplement based on fish meal. Growth rates (g/day) for the 5 treatments were 218, 253, 253, 256, and 292. Addition of SO₄²⁻ significantly increased growth rate and food utilization while MHA had no effect; formalin treatment reduced digestibility and food utilization. In a 2nd experiment 58 lambs were used to study the effect of protein supplements for lambs weaned at various ages and wts. Diets similar to (2) and (5) from experiment (1) were used, while an intermediate diet (6) was made from an equal mixture of diets (2) and (5). As weaning age increased and as live weight at weaning increased, the difference in growth rate and food utilization between lambs receiving diet (2) and those receiving diets (5) and (6) decreased. It is suggested that for

most sheep production systems in which concs. are used either as the sole feed or as supplements, simple fortification of whole grain with the necessary nutrients is all that is required to achieve optimum results.

IT 50-00-0, biological studies 583-91-5 7757-82-6

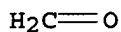
, biological studies

RL: BIOL (Biological study)

(feed experiment with, on lambs, barley in relation to)

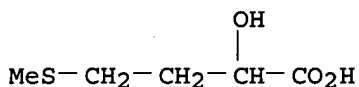
RN 50-00-0 HCAPLUS

CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)



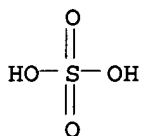
RN 583-91-5 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



RN 7757-82-6 HCAPLUS

CN Sulfuric acid disodium salt (8CI, 9CI) (CA INDEX NAME)



●2 Na

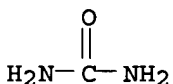
IT 57-13-6, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(feeding experiment with, on lambs, barley in relation to)

RN 57-13-6 HCAPLUS

CN Urea (8CI, 9CI) (CA INDEX NAME)



L45 ANSWER 45 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1978:5165 HCAPLUS

DOCUMENT NUMBER: 88:5165

TITLE: Methionine hydroxy analog in diets for lactating cows

AUTHOR(S): Bhargava, P. K.; Otterby, D. E.; Murphy, J. M.;

Donker, J. D.

CORPORATE SOURCE: Dep. Anim. Sci., Univ. Minnesota, St. Paul, MN, USA

SOURCE: Journal of Dairy Science (1977), 60(10), 1594-604

CODEN: JDSCAE; ISSN: 0022-0302

DOCUMENT TYPE: Journal
LANGUAGE: English

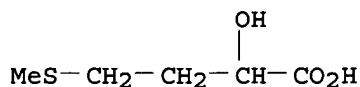
AB In 2 trials in consecutive years 47 and 50 lactating Holstein cows were assigned to grain mixts. that contained 0, 0.1, 0.2, and 0.3% methionine hydroxy analog [583-91-5]. Exptl. diets were offered to the cows beginning 2 wk prepartum, and collection of data was begun 4 days postpartum. Alfalfa hay and corn silage were fed ad libitum in a ratio of 1:1, dry basis. Milk fat test and yield were higher for cows supplemented with analog than for controls during **early** (4-116 days) lactation. Daily fiber intake was higher for cows fed 0.3% analog (2.2 kg) than for controls (1.9 kg) during **early** lactation in y 1 but not in y 2. Milk and solids-not-fat yields did not differ among treatments. Intakes of dry matter were not affected by treatment. From 117 to 256 days of lactation, there were no differences in yields of milk, fat, or solids-not-fat. Milk from cows maintained on the same treatment both y changed little in fat test from y 1 to y 2, but cows that were changed from high analog during y 1 to low during y 2 decreased 0.48 percentage units in test. Those changed from no analog to analog increased 0.34 percentage units in test, and those changes from low analog to high analog increased 0.23 percentage units. Methionine hydroxy analog appears to be a useful supplement for increasing fat test of cows fed relatively high concentrate diets.

IT 583-91-5

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(feeding experiment with, on cows, milk fat in relation to)

RN 583-91-5 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



L45 ANSWER 46 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1977:28736 HCAPLUS

DOCUMENT NUMBER: 86:28736

TITLE: Response to nonprotein nitrogen and sulfur sources by the **early**-weaned calf

AUTHOR(S): Winter, K. A.

CORPORATE SOURCE: Res. Stn., Agric. Canada, Charlottetown, PE, Can.

SOURCE: Canadian Journal of Animal Science (1976), 56(3), 567-72

CODEN: CNJNAT; ISSN: 0008-3984

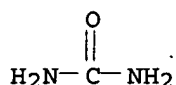
DOCUMENT TYPE: Journal

LANGUAGE: English

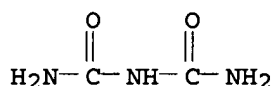
AB Calves were used in 2 expts. to evaluate 2 nonprotein N sources and several S sources in calf starter rations. Experiment (1) compared urea [57-13-6] and biuret [108-19-0], with and without methionine hydroxy analog (MHA) [583-91-5], and S plus MHA; experiment (2) compared the effect of elemental S and Na₂SO₄ added to a urea-supplemented starter on calf response to these feeds. Performance of calves on the biuret-supplemented starters was reduced as compared with urea-supplemented starters. The addition of S or MHA to the NPN-supplemented starters did not affect animal performance. However, S did tend to improve performance of the urea-fed calves and had the reverse effect when biuret was fed, while MHA tended to depress performance when urea was fed. In the 2nd experiment, the addition of either S or Na₂SO₄ to the urea-supplemented

starter did not improve animal performance, even when 40% of the total protein in the diets was supplied by nonprotein N sources. The urea-supplemented starter rations had N:S ratios before S supplementation of 11.4:1 (experiment (1)) and 9.4:1 (experiment (2)), close to the ratios considered optimum for ruminants.

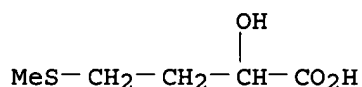
IT 57-13-6, biological studies 108-19-0 583-91-5
 7704-34-9, biological studies 7757-82-6, biological studies
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (feeding expts. with, on early-weaned calf)
 RN 57-13-6 HCAPLUS
 CN Urea (8CI, 9CI) (CA INDEX NAME)



RN 108-19-0 HCAPLUS
 CN Imidodicarbonic diamide (9CI) (CA INDEX NAME)



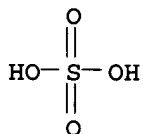
RN 583-91-5 HCAPLUS
 CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



RN 7704-34-9 HCAPLUS
 CN Sulfur (8CI, 9CI) (CA INDEX NAME)

S

RN 7757-82-6 HCAPLUS
 CN Sulfuric acid disodium salt (8CI, 9CI) (CA INDEX NAME)



●2 Na

L45 ANSWER 47 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1965:448290 HCAPLUS

DOCUMENT NUMBER: 63:48290

ORIGINAL REFERENCE NO.: 63:8800f-g

TITLE: The development of an amino acid reference diet for the early growth of chicks

AUTHOR(S): Dean, W. F.; Scott, H. M.

CORPORATE SOURCE: Univ. of Illinois, Urbana

SOURCE: Poultry Sci. (1965), 44(3), 803-8

DOCUMENT TYPE: Journal

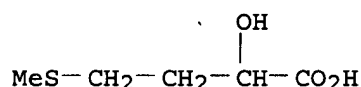
LANGUAGE: English

AB An amino acid diet patterned after the one reported by Greene, et al. (ibid. 39(2), 512-14(1960)) containing the equivalent of 26.20% protein was modified to give maximal growth with minimal levels of amino acids. The final mixture contained the equivalent of 17.6% protein. Expressed as percent of the diet the composition is as follows: L-arginine, 1.10; L-histidine, 0.30; L-lysine, 1.12; L-tyrosine, 0.63; L-tryptophan, 0.225; L-phenylalanine, 0.68; DL-methionine, 0.45; L-cystine, 0.35; L-threonine, 0.65; L-leucine, 1.20; L-isoleucine, 0.80; L-valine, 0.82; glycine, 1.60; L-glutamic acid, 12.00. All assays were conducted in the presence of 1% proline.

IT 583-91-5, Butyric acid, 2-hydroxy-4-(methylthio)-
(feeding expts. with, on chicks)

RN 583-91-5 HCAPLUS

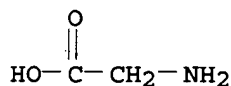
CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



IT 56-40-6, Glycine 56-87-1, Lysine 56-89-3,
Cystine 59-51-8, Methionine, DL- 60-18-4, Tyrosine
61-90-5, Leucine 63-91-2, Alanine, phenyl-
71-00-1, Histidine 72-18-4, Valine 72-19-5,
Threonine 73-22-3, Tryptophan 73-32-5, Isoleucine
74-79-3, Arginine
(in chick reference diet)

RN 56-40-6 HCAPLUS

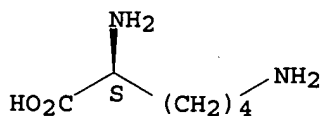
CN Glycine (8CI, 9CI) (CA INDEX NAME)



RN 56-87-1 HCAPLUS

CN L-Lysine (9CI) (CA INDEX NAME)

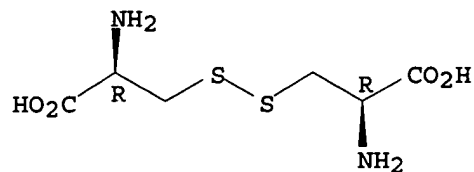
Absolute stereochemistry.



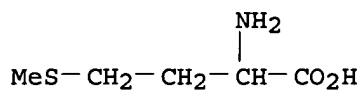
RN 56-89-3 HCAPLUS

CN L-Cystine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

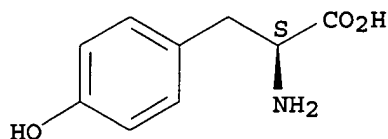


RN 59-51-8 HCAPLUS
CN Methionine (9CI) (CA INDEX NAME)



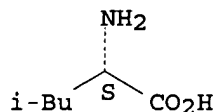
RN 60-18-4 HCAPLUS
CN L-Tyrosine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



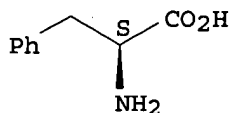
RN 61-90-5 HCAPLUS
CN L-Leucine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



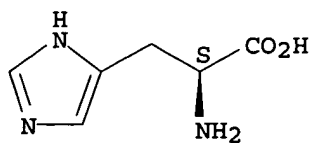
RN 63-91-2 HCAPLUS
CN L-Phenylalanine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



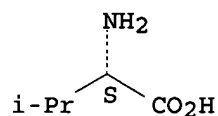
RN 71-00-1 HCAPLUS
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



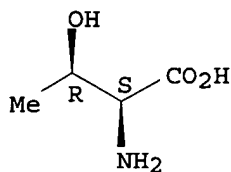
RN 72-18-4 HCAPLUS
CN L-Valine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



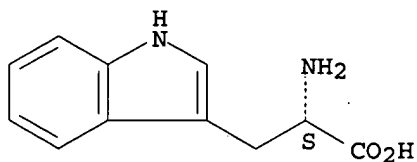
RN 72-19-5 HCAPLUS
CN L-Threonine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



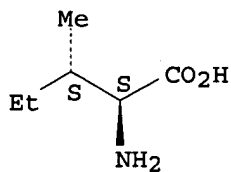
RN 73-22-3 HCAPLUS
CN L-Tryptophan (9CI) (CA INDEX NAME)

Absolute stereochemistry.



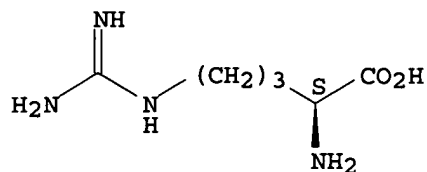
RN 73-32-5 HCAPLUS
CN L-Isoleucine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



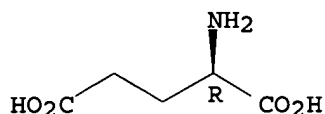
RN 74-79-3 HCAPLUS
CN L-Arginine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

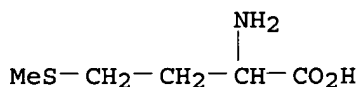


IT 6893-26-1, D-Glutamic acid
(in nutrition, of chicks)
RN 6893-26-1 HCAPLUS
CN D-Glutamic acid (9CI) (CA INDEX NAME)

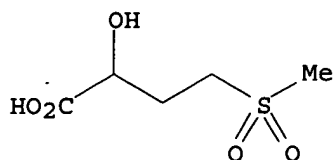
Absolute stereochemistry.



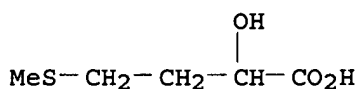
IT 59-51-8, Methionine, DL-
(nutritional value of)
RN 59-51-8 HCAPLUS
CN Methionine (9CI) (CA INDEX NAME)



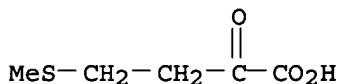
L45 ANSWER 48 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1965:418770 HCAPLUS
DOCUMENT NUMBER: 63:18770
ORIGINAL REFERENCE NO.: 63:3357f-g
TITLE: Sulfur-containing metabolites secreted by an
ethionine-resistant mutant of **Neurospora**
AUTHOR(S): Galsworthy, Sara B.; Metzenberg, R. L.
CORPORATE SOURCE: Univ. of Wisconsin Med. School, Madison
SOURCE: Biochemistry (Moscow, Russian Federation) (1965),
4(6), 1183-8
CODEN: BIORAK; ISSN: 0006-2979
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Several S compds. are secreted by a mutant of *N. crassa* which has lost
control over methionine biosynthesis. These compds. are
S-methyl- α -oxo- γ -mercaptobutyric acid, S-methyl- α -hydroxy- γ -
mercaptobutyric acid and the corresponding sulfone,
S-methyl- β -mercaptopropionic acid and the corresponding sulfone.
IT 2361-15-1, Butyric acid, 2-hydroxy-4-(methylsulfonyl)-, DL-
(formation by **Neurospora crassa** resistant to ethioine,
methionine formation and)
RN 2361-15-1 HCAPLUS
CN Butanoic acid, 2-hydroxy-4-(methylsulfonyl)- (9CI) (CA INDEX NAME)



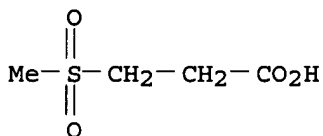
IT 583-91-5, Butyric acid, 2-hydroxy-4-(methylthio)-, DL-
 583-92-6, Butyric acid, 4-(methylthio)-2-oxo- 645-83-0,
 Propionic acid, 3-(methylsulfonyl)- 646-01-5, Propionic acid,
 3-(methylthio)-
 (formation by *Neurospora crassa* resistant to ethionine,
 methionine formation and)
 RN 583-91-5 HCAPLUS
 CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



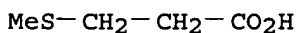
RN 583-92-6 HCAPLUS
 CN Butanoic acid, 4-(methylthio)-2-oxo- (9CI) (CA INDEX NAME)



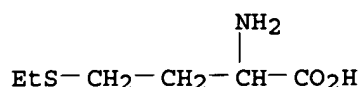
RN 645-83-0 HCAPLUS
 CN Propanoic acid, 3-(methylsulfonyl)- (9CI) (CA INDEX NAME)



RN 646-01-5 HCAPLUS
 CN Propanoic acid, 3-(methylthio)- (9CI) (CA INDEX NAME)



IT 67-21-0, Butyric acid, 2-amino-4-(ethylthio)-
 (*Neurospora crassa* resistant to, S-containing metabolites of)
 RN 67-21-0 HCAPLUS
 CN Homocysteine, S-ethyl- (9CI) (CA INDEX NAME)



L45 ANSWER 49 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1963:83701 HCAPLUS

DOCUMENT NUMBER: 58:83701

ORIGINAL REFERENCE NO.: 58:14418a-d

TITLE: β -Aminoisobutyric acid and taurine excretion, and plasma levels after local x-ray irradiation, in two cancer patients

AUTHOR(S): Bigwood, E. J.; Soupart, P.

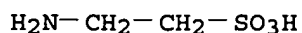
CORPORATE SOURCE: Univ. Libre, Brussels, Belg.

SOURCE: Proc. Symp. Biol. Effects Ionizing Radiation Mol. Level, Brno (1962) 277-86

DOCUMENT TYPE: Journal

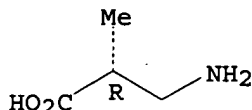
LANGUAGE: Unavailable

- AB Others observed hyperamino-aciduria in subjects accidentally injured by nuclear radiations. The present authors wanted to determine to what extent and in what form amino-aciduria could serve as an **early** warning that **exposure** to nuclear **radiations** has occurred. To this end, the question of whether therapeutic x-ray treatment of cancerous patients produces similar effects was studied. One of the subjects suffered from chronic lymphocytic leukemia; at first he received in the spleen area a 50-r. x-ray external dose, followed after a few days by similar exposures, alternatively on the spleen area and on lymph nodes in the neck. Complete chromatograms of free amino acids in urine (24-hr. output) and of free amino acid levels in blood plasma, were obtained. They showed normal profiles before treatment. The two main features consisted in a 10-fold increase in taurine excretion and a 4-fold increase in β -aminobutyric acid excretion, within the first 24 hrs. following the first dose of x-rays. Both free and combined taurine were increased to that extent; during the following days, the excretion regressed but stayed high, and the subsequent x-ray doses did not produce a significant new rise in output of both amino acids. In plasma, the level of taurine was significantly increased. All the other free amino acids were unaffected, except perhaps for an increase in **methionine** sulfoxide. The origin of the 2 main features concerning the two above-mentioned amino acids is discussed. It is probably different in each of the 2 cases. The 2nd patient, in which quite similar plasma findings were observed, suffered from Hodgkin's disease. The above-described phenomenon was examined in this latter case, in conjunction with serum transaminase activities taken as an index of cell injury. Increased urinary excretion of β -aminoisobutyric acid and taurine may be tentatively considered as an **early** sign of mild radiobiol. damage in connection with tissue breakdown, or at least the alteration it produces is a possible warning that **exposure** to **irradiation** exists.
- IT 107-35-7, Taurine 2140-95-6, β -Alanine, 2-methyl- (in blood plasma and urine, as indicator of **radiation exposure**)
- RN 107-35-7 HCAPLUS
- CN Ethanesulfonic acid, 2-amino- (9CI) (CA INDEX NAME)



RN 2140-95-6 HCAPLUS
 CN Propanoic acid, 3-amino-2-methyl-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L45 ANSWER 50 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1962:458453 HCAPLUS

DOCUMENT NUMBER: 57:58453

ORIGINAL REFERENCE NO.: 57:11665h-i,11666a

TITLE: Effect of selenate ions on the growth of *Neurospora crassa* in the presence of various sulfur sources

AUTHOR(S): Widstrom, Virginia R.

CORPORATE SOURCE: S. Dakota Agr. Expt. Sta., Brookings

SOURCE: Proc. S. Dakota Acad. Sci. (1961), 40, 208-12

DOCUMENT TYPE: Journal

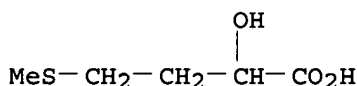
LANGUAGE: Unavailable

AB Wild type *N. crassa* was grown on Difco Bacto-*Neurospora* culture agar for the production of spores. The exptl. work was done in 125-ml. flasks containing 26 ml. liquid medium of Beadle and Tatum as modified by Ragland and Liverman, with added sulfur and selenate sources. The mold was allowed to grow for 4 days at room temperature and then the mycelia were removed and dried for 4 hrs. at 100° and weighed. Dry yields in control flasks containing the equivalent of 10-3M sulfate as K₂SO₄, methionine, homocysteine, and α-hydroxy-γ-methylthiobutyric acid were approx. equal (.apprx.60 mg./flask). With the addition of selenate ions (0.5-2.5 + 10-4M K₂SeO₄), the yields in dry mycelia dropped sharply. Growth was depressed to as little as 5 mg./flask.

IT 583-91-5, Butyric acid, 2-hydroxy-4-(methylthio)-
 (in *Neurospora crassa* nutrition, selenate effect and)

RN 583-91-5 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



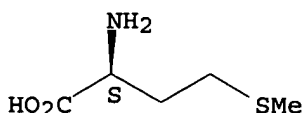
IT 63-68-3, Methionine

(in *Neurospora crassa* nutrition, selenate effect on)

RN 63-68-3 HCAPLUS

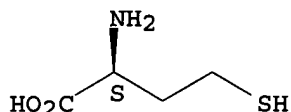
CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 6027-13-0, Butyric acid, 2-amino-4-mercapto-
 (metabolism of, by *Neurospora crassa*, selenate effect and)
 RN 6027-13-0 HCAPLUS
 CN L-Homocysteine (9CI) (CA INDEX NAME)

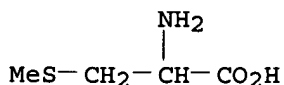
Absolute stereochemistry.



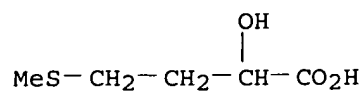
IT 7704-34-9, Sulfur
 (*Neurospora crassa* response to, selenate effect on)
 RN 7704-34-9 HCAPLUS
 CN Sulfur (8CI, 9CI) (CA INDEX NAME)

S

L45 ANSWER 51 OF 51 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1957:30419 HCAPLUS
 DOCUMENT NUMBER: 51:30419
 ORIGINAL REFERENCE NO.: 51:5903f-h
 TITLE: S-Methyl-L-cysteine as a naturally occurring
 metabolite in *Neurospora crassa*
 AUTHOR(S): Ragland, James B.; Liverman, James L.
 CORPORATE SOURCE: Texas Agr. Expt. Sta., College Station
 SOURCE: Archives of Biochemistry and Biophysics (1956), 65,
 574-6
 CODEN: ABBIA4; ISSN: 0003-9861
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 AB S-Methyl-L-cysteine (I) supports growth of *N. crassa*. With some strains,
 addition of I permits utilization of methionine, methionine Me sulfonium, and
 α -hydroxy- γ -methylthiolbutyric acid as a sole S source but not
 cysteine, cystathionine, homocysteine, or ethionine. *Neurospora*
 grown on methionine incorporates S3504-- into I. It cannot be stated
 whether or not I lies on the principal pathway of S metabolism in
Neurospora.
 IT 7728-98-5, Alanine, 3-(methylthio)-
 (in *Neurospora crassa*)
 RN 7728-98-5 HCAPLUS
 CN Cysteine, S-methyl- (9CI) (CA INDEX NAME)

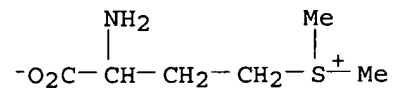


IT 583-91-5, Butyric acid, 2-hydroxy-4-(methylthio)-
 7329-84-2, Sulfonium, (3-amino-3-carboxypropyl)dimethyl-, inner
 salt
 (metabolism by *Neurospora crassa*, S-methyl-L-cysteine in)
 RN 583-91-5 HCAPLUS
 CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



RN 7329-84-2 HCAPLUS

CN Sulfonium, (3-amino-3-carboxypropyl)dimethyl-, inner salt (9CI) (CA INDEX NAME)



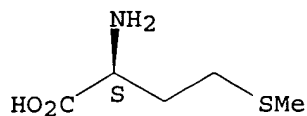
IT 63-68-3, Methionine

(metabolism of, by *Neurospora crassa*, S-methyl-L-cysteine in)

RN 63-68-3 HCAPLUS

CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> □

=> d que stat 145

L1 16 SEA FILE=HCAPLUS ABB=ON ("CAMPBELL KATHLEEN"/AU OR "CAMPBELL
KATHLEEN A"/AU OR "CAMPBELL KATHLEEN C M"/AU)
L10 2202693 SEA FILE=HCAPLUS ABB=ON (?OTOTOX? OR ?OTOLOG? OR ?OTOLARYNG?
OR EAR? OR ?NEUROTOX? OR ?NEURO? OR ?ALOPECIA? OR ?GASTROINTEST
? OR ?INTEST? OR ?RADIATION?)
L14 3986 SEA FILE=HCAPLUS ABB=ON L10 AND (L1 OR ?METHIONINE?) (L) (?PREVE
NT? OR ?PROTECT? OR ?INHIBIT? OR ?CONTROL?)
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OR EAR? OR ?NEUROTOX? OR ?NEURO? OR ?ALOPECIA? OR ?GASTROINTEST
? OR ?INTEST? OR ?REDUC? (3A) ?SURVIV?)
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L21 9 SEA FILE=HCAPLUS ABB=ON L20 AND (L1 OR ?METHIONINE?)
L22 STR

7

G3

Ak~N~Ak

8 @9 10

H3C~G1~S~G2~CH~G4
1 2 3 4 5 6

REP G1=(0-3) CH2

REP G2=(1-3) CH2

VAR G3=O/C

VAR G4=9/OH

NODE ATTRIBUTES:

BEST AVAILABLE COPY

continued on next page

Searched by Mary Jane Ruhl x 22524

Page 269

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M1-X6 C AT 8
ECOUNT IS M1-X6 C AT 10

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

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L40 517 SEA FILE=HCAPLUS ABB=ON L39
L41 43 SEA FILE=HCAPLUS ABB=ON L40 AND (?OTOTOXICITY? OR ?OTOL? OR
EAR? OR ?NEUROTOX? OR ?NEURO? OR ?ALOPECIA? OR ?GASTROINTEST?)
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63631-40-3/BI OR 63-91-2/BI OR 64854-64-4/BI OR 74-79-3/BI OR
13073-35-3/BI OR 15663-27-1/BI OR 348-67-4/BI OR 359-83-1/BI
OR 465-65-6/BI OR 50-99-7/BI OR 56-40-6/BI OR 57-13-6/BI OR
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166852-06-8/BI OR 167712-81-4/BI OR 168658-56-8/BI OR 170319-39-
-8/BI OR 17
L45 51 SEA FILE=HCAPLUS ABB=ON L43 AND L44

=> d que stat 150

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L1'      16 SEA FILE=HCAPLUS ABB=ON  ("CAMPBELL KATHLEEN"/AU OR "CAMPBELL
        KATHLEEN A"/AU OR "CAMPBELL KATHLEEN C M"/AU)
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L14      3986 SEA FILE=HCAPLUS ABB=ON  L10 AND (L1 OR ?METHIONINE?) (L) (?PREVE
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L19      1521162 SEA FILE=HCAPLUS ABB=ON  (?OTOTOX? OR ?OTOLOG? OR ?OTOLARYNG?
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L20      1718 SEA FILE=HCAPLUS ABB=ON  L19 AND ?RADIAT?(3A)?EXPOS?
L21      9 SEA FILE=HCAPLUS ABB=ON  L20 AND (L1 OR ?METHIONINE?)
L22      STR

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7
G3
}

Ak~N~Ak
8 @9 10

H3C~G1~S~G2~CH~G4
1 2 3 4 5 6

REP G1=(0-3) CH2

REP G2=(1-3) CH2

VAR G3=O/C

VAR G4=9/OH

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M1-X6 C AT 8

ECOUNT IS M1-X6 C AT 10

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

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L37      45551 SEA FILE=REGISTRY ABB=ON  L36
L39      8 SEA FILE=REGISTRY SUB=L37 SSS FUL L22
L40      517 SEA FILE=HCAPLUS ABB=ON  L39
L41      43 SEA FILE=HCAPLUS ABB=ON  L40 AND (?OTOTOXICITY? OR ?OTOL? OR
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-8/BI OR 17

L45	51	SEA FILE=HCAPLUS	ABB=ON	L43 AND L44
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L49	5	SEA FILE=HCAPLUS	ABB=ON	L45 AND ?PROTECT?
L50	9	SEA FILE=HCAPLUS	ABB=ON	L47 OR L49

=> d ibib abs hitstr 150 1-9

L50 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:912094 HCAPLUS

DOCUMENT NUMBER: 140:145274

TITLE: Adaptations in body muscle and fat in transition dairy cattle fed differing amounts of protein and methionine hydroxy analog

AUTHOR(S): Phillips, G. J.; Citron, T. L.; Sage, J. S.; Cummins, K. A.; Cecava, M. J.; McNamara, J. P.

CORPORATE SOURCE: CH2M Hill, Hanford, WA, USA

SOURCE: Journal of Dairy Science (2003), 86(11), 3634-3647

CODEN: JDSCAE; ISSN: 0022-0302

PUBLISHER: American Dairy Science Association

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The effects of prepartum dietary protein intake and dietary amino acid balance on milk production, adaptations in body fat, and **blood serum** protein and amino acid concns. (and indirectly body protein breakdown) in **early** lactation were studied in 42 multiparous Holstein dairy cows. The cows were fed diets containing 11 or 14% crude protein (CP) with or without 20 g methionine hydroxy analog daily for 21 days prepartum and then were fed common diet with 17% CP for 120 days postpartum, with or without 50 g methionine hydroxy analog (Rhodimet AT-88) daily. The dry matter (DM) intake postpartum averaged 25.4 kg and milk production 41.6 kg. Cows fed the 14% CP diet ate 0.7 kg more DM and gave 1.7 kg more milk than those fed the 11% CP diet prepartum. Cows fed the methionine hydroxy analog prepartum lost less body protein from -14 to +60 days in milk. From day 60 to 120, body fat increased 8.5 and 11.5 kg in low- and high-protein groups and body protein increased 0.5 and 1.0 kg. **Blood serum** concns. of branched-chain amino acids fell 17% in the first few weeks postpartum, lysine fell 15%, histidine fell 16%, methionine increased 20%, and cysteine increased 30%. The serum 3-methylhistidine/creatinine ratio was determined to indicate muscle protein degradation. An increase in this ratio 7 days postpartum indicated increased body protein breakdown and there was no effect of prepartum ration composition. Increased protein intake prepartum may allow more feed intake and milk production postpartum. Supplementing the methionine analog to a ration already balanced in methionine by contemporary models may spare body protein.

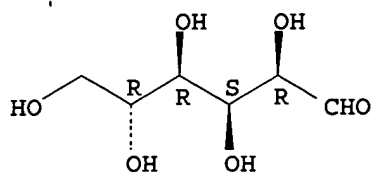
IT 50-99-7, D-Glucose, biological studies 52-90-4, L-Cysteine, biological studies 56-86-0, L-Glutamic acid, biological studies 56-87-1, L-Lysine, biological studies 57-13-6, Urea, biological studies 60-27-5, Creatinine 61-90-5, Leu, biological studies 63-42-3, Lactose 63-68-3, L-Methionine, biological studies 71-00-1, L-Histidine, biological studies 72-18-4, L-Valine, biological studies 73-32-5, L-Isoleucine, biological studies 74-79-3, L-Arginine, biological studies 147-85-3, Proline, biological studies 368-16-1, 3-Methylhistidine

RL: BSU (Biological study, unclassified); BIOL (Biological study) (diets with differing amts. of protein and methionine hydroxy analog effects on adaptations in body muscle and fat in transition Holstein dairy cows)

RN 50-99-7 HCAPLUS

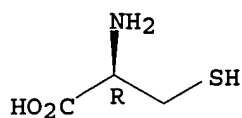
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



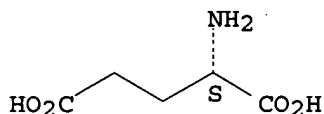
RN 52-90-4 HCAPLUS
CN L-Cysteine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



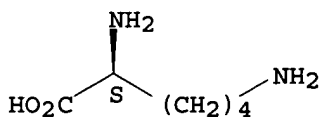
RN 56-86-0 HCAPLUS
CN L-Glutamic acid (9CI) (CA INDEX NAME)

Absolute stereochemistry.

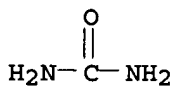


RN 56-87-1 HCAPLUS
CN L-Lysine (9CI) (CA INDEX NAME)

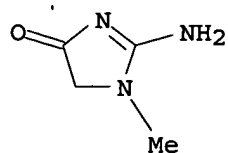
Absolute stereochemistry.



RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



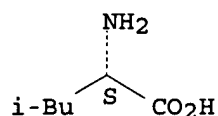
RN 60-27-5 HCAPLUS
CN 4H-Imidazol-4-one, 2-amino-1,5-dihydro-1-methyl- (9CI) (CA INDEX NAME)



RN 61-90-5 HCAPLUS

CN L-Leucine (9CI) (CA INDEX NAME)

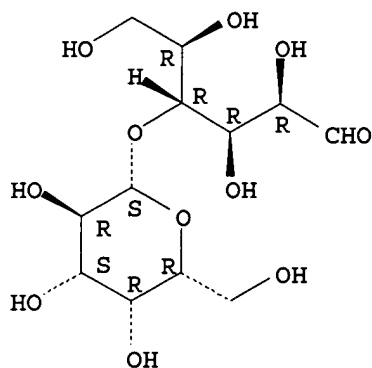
Absolute stereochemistry. Rotation (+).



RN 63-42-3 HCAPLUS

CN D-Glucose, 4-O-β-D-galactopyranosyl- (9CI) (CA INDEX NAME)

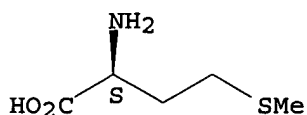
Absolute stereochemistry. Rotation (+).



RN 63-68-3 HCAPLUS

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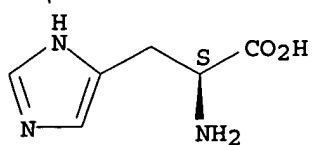
Absolute stereochemistry.



RN 71-00-1 HCAPLUS

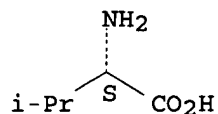
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



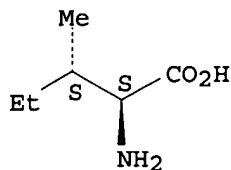
RN 72-18-4 HCAPLUS
CN L-Valine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



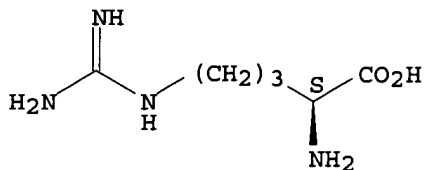
RN 73-32-5 HCAPLUS
CN L-Isoleucine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



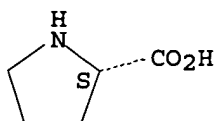
RN 74-79-3 HCAPLUS
CN L-Arginine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



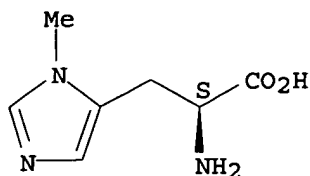
RN 147-85-3 HCAPLUS
CN L-Proline (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

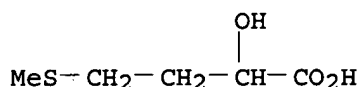


RN 368-16-1 HCAPLUS
CN L-Histidine, 3-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 583-91-5 352708-35-1, Rhodimet at 88
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
 (diets with differing amts. of protein and methionine hydroxy analog
 effects on adaptations in body muscle and fat in transition Holstein
 dairy cows)
 RN 583-91-5 HCAPLUS
 CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



RN 352708-35-1 HCAPLUS
 CN Rhodimet AT 88 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:537491 HCAPLUS

DOCUMENT NUMBER: 135:117260

TITLE: Therapeutic use of D-methionine to reduce
 the toxicity of ototoxic drugs, noise, and
 radiation

INVENTOR(S): Campbell, Kathleen C. M.

PATENT ASSIGNEE(S): Southern Illinois University School of Medicine, USA

SOURCE: U.S., 23 pp., Cont.-in-part of U.S. 6,187,817.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6265386	B1	20010724	US 1998-57065	19980408
US 6187817	B1	20010213	US 1997-942845	19971002
PT 1019036	T	20031128	PT 1998-915362	19980408
ES 2202834	T3	20040401	ES 1998-915362	19980408
US 2002019443	A1	20020214	US 2001-911195	20010723
US 2004110719	A1	20040610	US 2003-694448	20031027
US 2004127568	A1	20040701	US 2003-694432	20031027
PRIORITY APPLN. INFO.:			US 1997-942845	A2 19971002
			US 1996-27750P	P 19961003
			US 1998-57065	A2 19980408
			US 2001-911195	A1 20010723

AB Methods of preventing or reducing hearing or balance loss, damage to

ear cells, weight loss, gastrointestinal toxicity, neurotoxicity, alopecia, and prolonging survival in patients undergoing treatment with therapeutically effective amts. of platinum-containing chemotherapeutic agents such as cisplatin are provided. Methods are also provided for preventing or reducing such symptoms in patients undergoing treatment with loop diuretics, aminoglycoside antibiotics, iron chelating agents, quinine, and quinidine, or those who have been exposed to toxic levels of noise or radiation. These methods comprise administering an effective amount of a **methionine protective agent**, such as D-methionine, prior to, simultaneously with, or subsequently to administration of the platinum-containing chemotherapeutic agent, loop diuretic agent, etc., or **exposure** to noise or **radiation**. Combinations of these time periods can also be employed.

IT 7439-89-6, Iron, biological studies

RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(chelating agents; therapeutic use of D-methionine and related compds. to reduce toxicity of **ototoxic** drugs, noise, platinum-containing antitumor drugs, and radiation)

RN 7439-89-6 HCAPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

IT 56-54-2, Quinidine 57-92-1, Streptomycin, biological studies 59-01-8, Kanamycin 114-07-8, Erythromycin 130-95-0, Quinine 1403-66-3, Gentamicin 1404-04-2, Neomycin 1404-90-6, Vancomycin 6379-56-2, Hygromycin 7542-37-2, Paromomycin 14096-51-6, Dichloro(ethylenediamine)platinum(II) 14215-58-8, Chloro(diethylenetriamine)platinum(II) chloride 14913-33-8, trans-Diamminedichloroplatinum(II) 15663-27-1, Cisplatin 20115-64-4 32986-56-4, Tobramycin 37517-28-5, Amikacin 41575-93-3 41575-94-4, Carboplatin 41666-77-7 56391-56-1, Netilmicin 62928-11-4, Iproplatin 64363-09-3 67254-31-3 74790-08-2, Spiroplatin 114579-59-8 141610-50-6 148977-78-0 149055-58-3

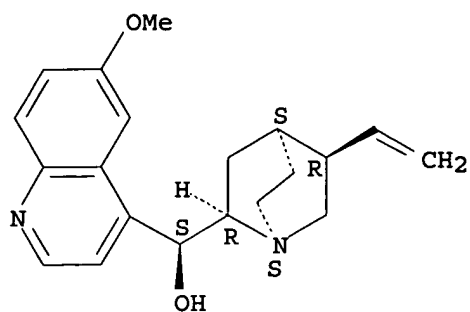
RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(therapeutic use of D-methionine and related compds. to reduce toxicity of **ototoxic** drugs, noise, platinum-containing antitumor drugs, and radiation)

RN 56-54-2 HCAPLUS

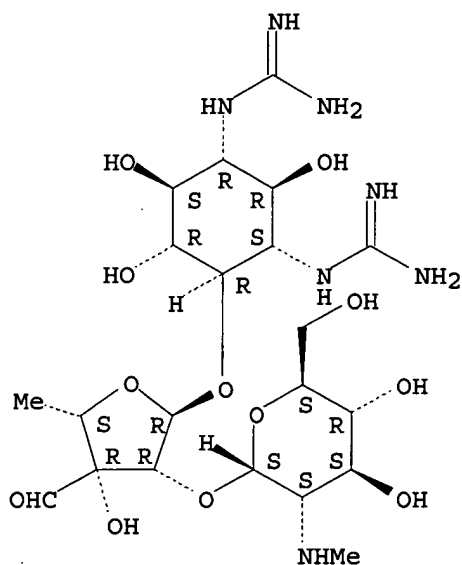
CN Cinchonan-9-ol, 6'-methoxy-, (9S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



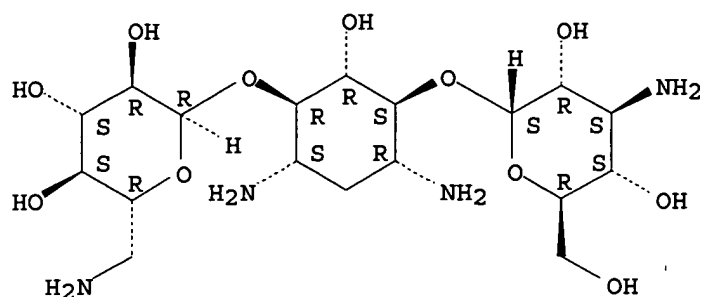
RN 57-92-1 HCAPLUS
 CN D-Streptamine, O-2-deoxy-2-(methylamino)- α -L-glucopyranosyl-(1 \rightarrow 2)-O-5-deoxy-3-C-formyl- α -L-lyxofuranosyl-(1 \rightarrow 4)-N,N'-bis(aminoiminomethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



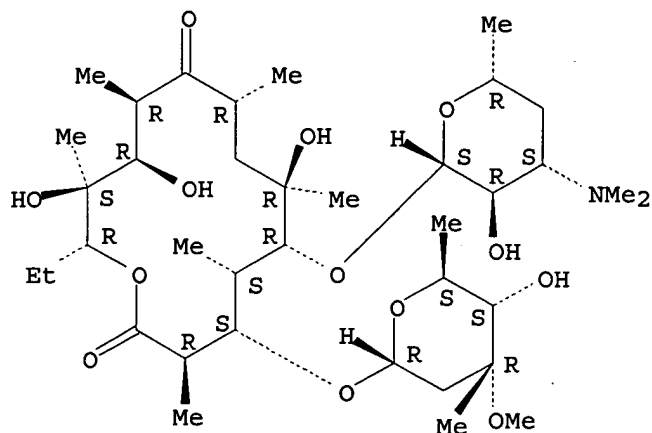
RN 59-01-8 HCAPLUS
 CN D-Streptamine, O-3-amino-3-deoxy- α -D-glucopyranosyl-(1 \rightarrow 6)-O-[6-amino-6-deoxy- α -D-glucopyranosyl-(1 \rightarrow 4)]-2-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



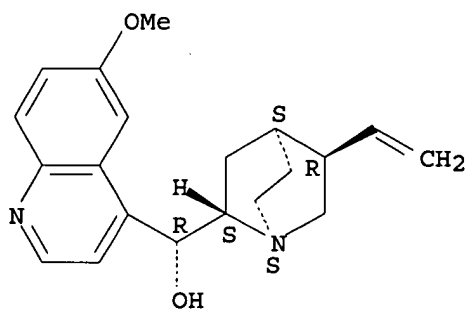
RN 114-07-8 HCAPLUS
 CN Erythromycin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 130-95-0 HCAPLUS
 CN Cinchonan-9-ol, 6'-methoxy-, (8α,9R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 1403-66-3 HCAPLUS
 CN Gentamicin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 1404-04-2 HCAPLUS
 CN Neomycin (9CI) (CA INDEX NAME)

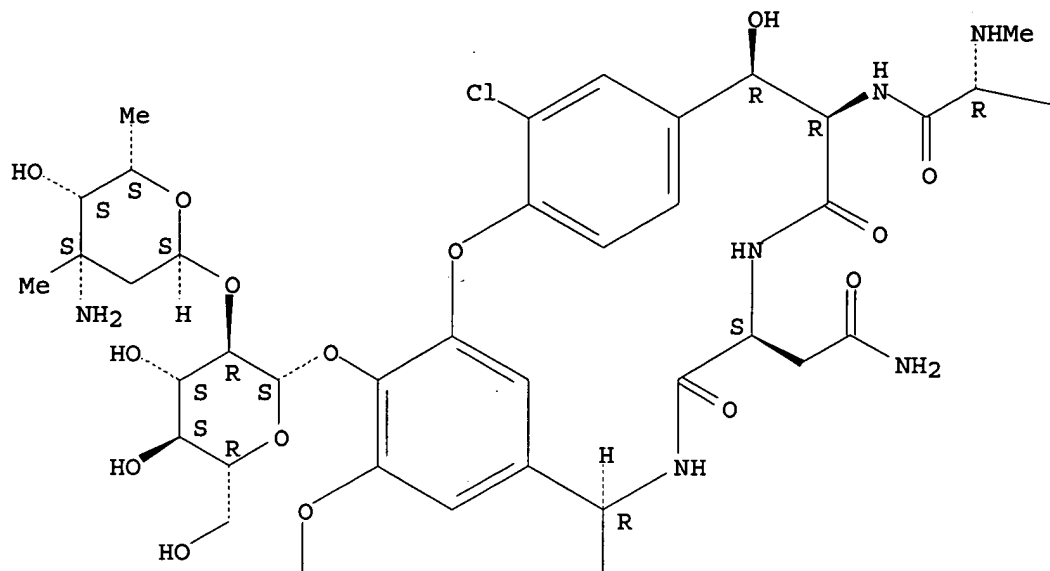
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 1404-90-6 HCAPLUS

CN Vancomycin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

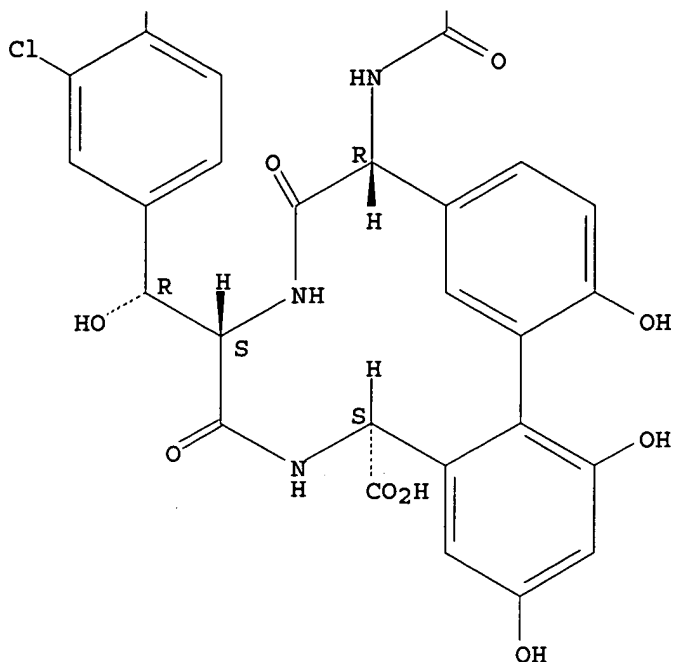
PAGE 1-A



PAGE 1-B

Bu-i

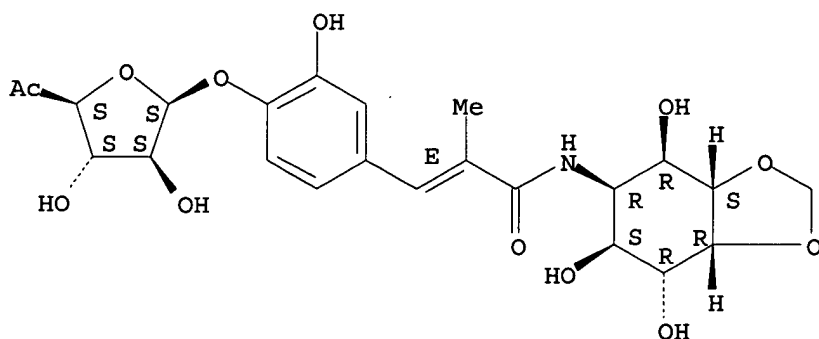
PAGE 2-A



RN 6379-56-2 HCAPLUS

CN D-neo-Inositol, 5-deoxy-5-[[[(2E)-3-[4-[(6-deoxy-β-D-arabino-hexofuranos-5-ulos-1-yl)oxy]-3-hydroxyphenyl]-2-methyl-1-oxo-2-propenyl]amino]-1,2-O-methylene- (9CI) (CA INDEX NAME)

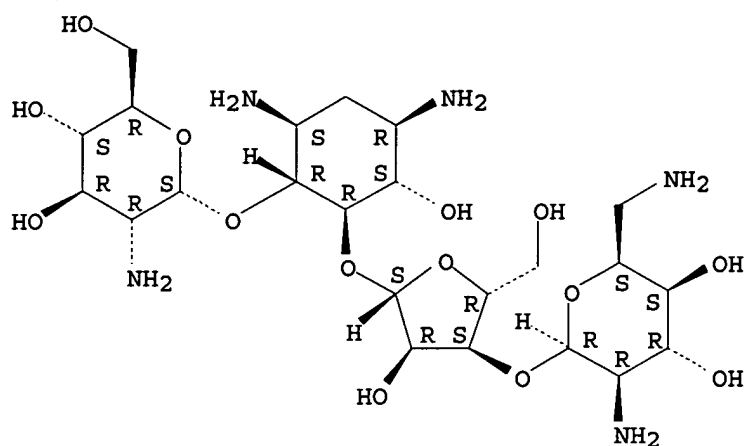
Absolute stereochemistry.
Double bond geometry as shown.



RN 7542-37-2 HCAPLUS

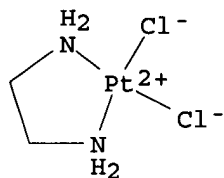
CN D-Streptamine, O-2-amino-2-deoxy-α-D-glucopyranosyl-(1→4)-O-[O-2,6-diamino-2,6-dideoxy-β-L-idopyranosyl-(1→3)-β-D-ribofuranosyl-(1→5)]-2-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



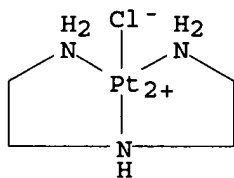
RN 14096-51-6 HCAPLUS

CN Platinum, dichloro(1,2-ethanediamine-κN,κN')-, (SP-4-2)- (9CI)
(CA INDEX NAME)



RN 14215-58-8 HCAPLUS

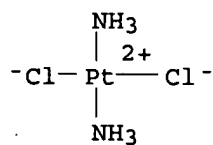
CN Platinum(1+), [N-[2-(amino-κN)ethyl]-1,2-ethanediamine-κN,κN']chloro-, chloride, (SP-4-2)- (9CI) (CA INDEX NAME)



● Cl⁻

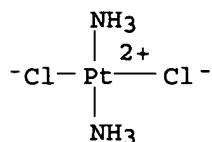
RN 14913-33-8 HCAPLUS

CN Platinum, diamminedichloro-, (SP-4-1)- (9CI) (CA INDEX NAME)



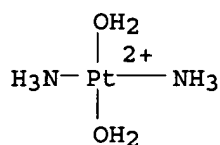
RN 15663-27-1 HCAPLUS

CN Platinum, diamminedichloro-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 20115-64-4 HCAPLUS

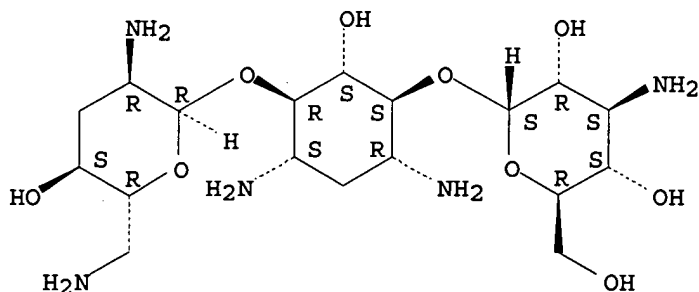
CN Platinum(2+), diamminediaqua-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 32986-56-4 HCAPLUS

CN D-Streptamine, O-3-amino-3-deoxy- α -D-glucopyranosyl-(1 \rightarrow 6)-O-[2,6-diamino-2,3,6-trideoxy- α -D-ribo-hexopyranosyl-(1 \rightarrow 4)]-2-deoxy- (9CI) (CA INDEX NAME)

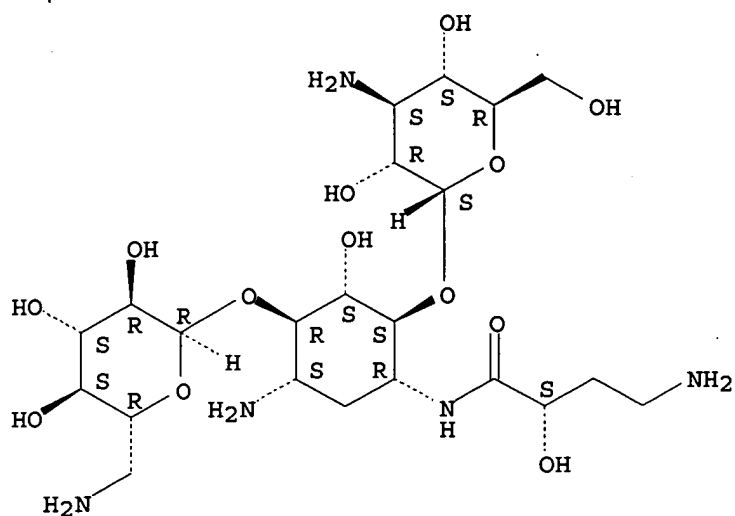
Absolute stereochemistry.



RN 37517-28-5 HCAPLUS

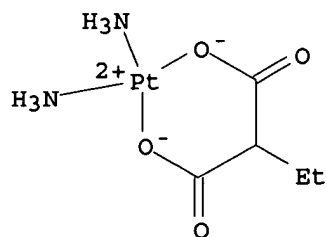
CN D-Streptamine, O-3-amino-3-deoxy- α -D-glucopyranosyl-(1 \rightarrow 6)-O-[6-amino-6-deoxy- α -D-glucopyranosyl-(1 \rightarrow 4)]-N1-[(2S)-4-amino-2-hydroxy-1-oxobutyl]-2-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



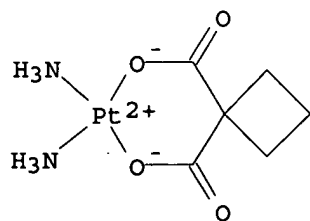
RN 41575-93-3 HCAPLUS

CN Platinum, diammine[ethylpropanedioato(2-)-κO1,κO3]-, (SP-4-2)-
(9CI) (CA INDEX NAME)



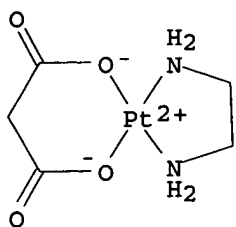
RN 41575-94-4 HCAPLUS

CN Platinum, diammine[1,1-cyclobutanedi(carboxylato-κO)(2-)]-,
(SP-4-2)- (9CI) (CA INDEX NAME)



RN 41666-77-7 HCAPLUS

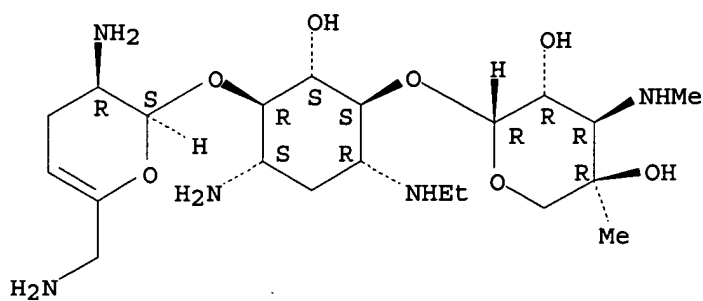
CN Platinum, (1,2-ethanediamine-κN,κN')[propanedioato(2-)-
κO1,κO3]-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 56391-56-1 HCAPLUS

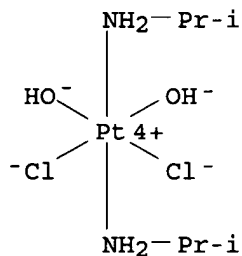
CN D-Streptamine, O-3-deoxy-4-C-methyl-3-(methylamino)- β -L-arabinopyranosyl-(1 \rightarrow 6)-O-[2,6-diamino-2,3,4,6-tetradeoxy- α -D-glycero-hex-4-enopyranosyl-(1 \rightarrow 4)]-2-deoxy-N1-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



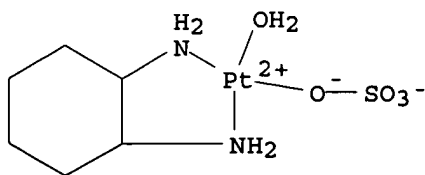
RN 62928-11-4 HCAPLUS

CN Platinum, dichlorodihydroxybis(2-propanamine)-, (OC-6-33)- (9CI) (CA INDEX NAME)

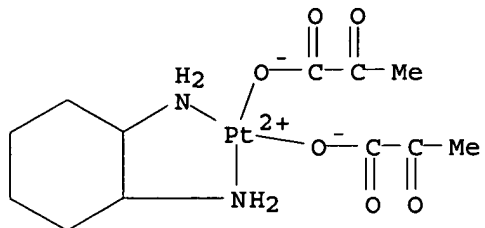


RN 64363-09-3 HCAPLUS

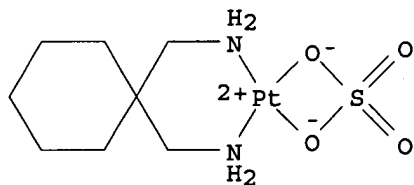
CN Platinum, aqua(1,2-cyclohexanediamine- κ N, κ N') [sulfato(2-)- κ O]-, (SP-4-3)- (9CI) (CA INDEX NAME)



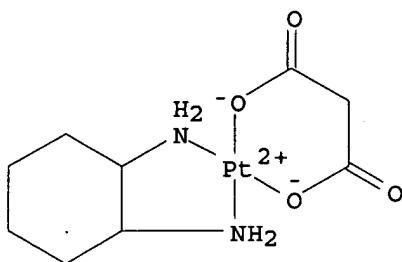
RN 67254-31-3 HCAPLUS

CN Platinum, (1,2-cyclohexanediamine- $\kappa N, \kappa N'$)bis(2-oxopropanoato- κO)-, (SP-4-2)- (9CI) (CA INDEX NAME)

RN 74790-08-2 HCAPLUS

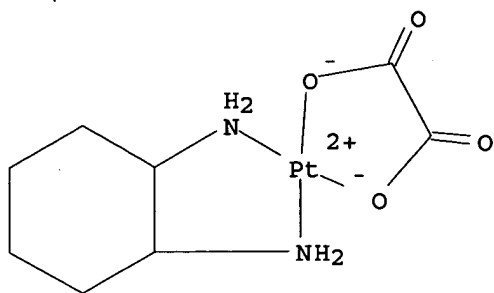
CN Platinum, (1,1-cyclohexanedimethanamine- $\kappa N, \kappa N'$) [sulfato(2-)- $\kappa O, \kappa O'$]-, (SP-4-2)- (9CI) (CA INDEX NAME)

RN 114579-59-8 HCAPLUS

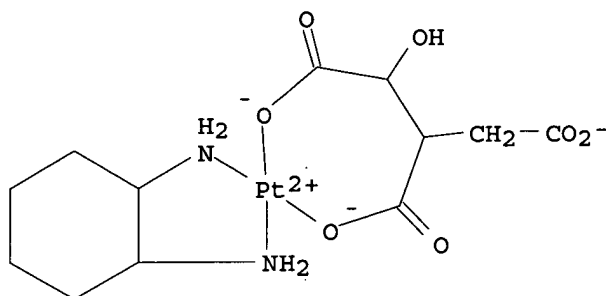
CN Platinum, (1,2-cyclohexanediamine- $\kappa N, \kappa N'$) [propanedioato(2-)- $\kappa O1, \kappa O3$]-, (SP-4-2)- (9CI) (CA INDEX NAME)

RN 141610-50-6 HCAPLUS

CN Platinum, (1,2-cyclohexanediamine- $\kappa N, \kappa N'$) [ethanedioato(2-)- $\kappa O1, \kappa O2$]-, (SP-4-2)- (9CI) (CA INDEX NAME)

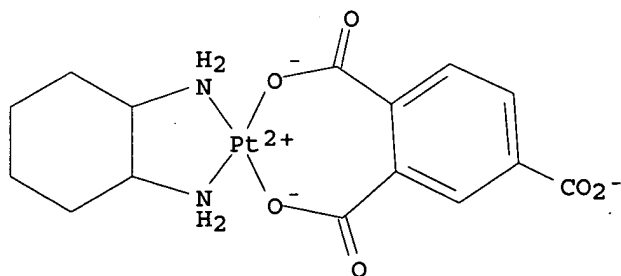


RN 148977-78-0 HCAPLUS
 CN Platinate(1-), (1,2-cyclohexanediamine- κ N, κ N') [1-hydroxy-1,2,3-propanetricarboxylato(3-)- κ O1, κ O2]-, hydrogen, (SP-4-3)- (9CI)
 (CA INDEX NAME)



● H⁺

RN 149055-58-3 HCAPLUS
 CN Platinate(1-), [1,2,4-benzenetricarboxylato(3-)- κ O1, κ O2] (1,2-cyclohexanediamine- κ N, κ N')-, hydrogen, (SP-4-3)- (9CI) (CA INDEX NAME)



● H⁺

IT 59-51-8, Methionine 63-68-3, L-Methionine, biological studies 348-67-4, D-

Methionine 502-83-0, Methioninol 1319-79-5

6094-76-4, Homomethionine 13073-35-3,

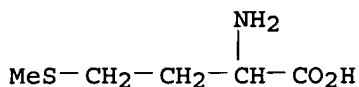
Ethionine 29908-03-0, S-Adenosyl-L-methionine

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(therapeutic use of D-methionine and related compds. to reduce toxicity of ototoxic drugs, noise, platinum-containing antitumor drugs, and radiation)

RN 59-51-8 HCAPLUS

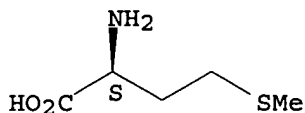
CN Methionine (9CI) (CA INDEX NAME)



RN 63-68-3 HCAPLUS

CN L-Methionine (9CI) (CA INDEX NAME)

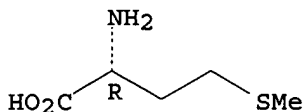
Absolute stereochemistry.



RN 348-67-4 HCAPLUS

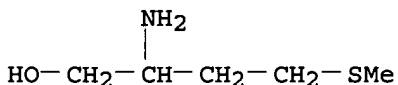
CN D-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



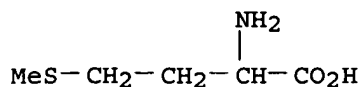
RN 502-83-0 HCAPLUS

CN 1-Butanol, 2-amino-4-(methylthio)- (7CI, 8CI, 9CI) (CA INDEX NAME)



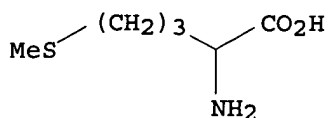
RN 1319-79-5 HCAPLUS

CN L-Methionine, hydroxy- (9CI) (CA INDEX NAME)



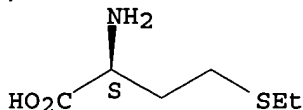
D1-OH

RN 6094-76-4 HCAPLUS
 CN Norvaline, 5-(methylthio)- (9CI) (CA INDEX NAME)



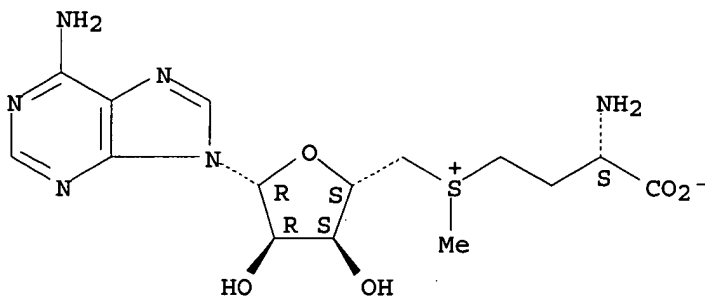
RN 13073-35-3 HCAPLUS
 CN L-Homocysteine, S-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 29908-03-0 HCAPLUS
 CN Adenosine, 5'-[[(3S)-3-amino-3-carboxypropyl]methylsulfonio]-5'-deoxy-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 72 THERE ARE 72 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1999:249071 HCAPLUS
 DOCUMENT NUMBER: 130:262147
 TITLE: Use of D-methionine or other methionine compound to reduce the toxicity of ototoxic drugs, noise, and radiation
 INVENTOR(S): Campbell, Kathleen C. M.

PATENT ASSIGNEE(S): Southern Illinois University, USA
 SOURCE: PCT Int. Appl., 67 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9917765	A1	19990415	WO 1998-US6960	19980408
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6187817	B1	20010213	US 1997-942845	19971002
CA 2303901	AA	19990415	CA 1998-2303901	19980408
AU 9869568	A1	19990427	AU 1998-69568	19980408
AU 753039	B2	20021003		
EP 1019036	A1	20000719	EP 1998-915362	19980408
EP 1019036	B1	20030625		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001518499	T2	20011016	JP 2000-514636	19980408
AT 243511	E	20030715	AT 1998-915362	19980408
PT 1019036	T	20031128	PT 1998-915362	19980408
ES 2202834	T3	20040401	ES 1998-915362	19980408
PRIORITY APPLN. INFO.:			US 1997-942845	A 19971002
			US 1996-27750P	P 19961003
			WO 1998-US6960	W 19980408

OTHER SOURCE(S): MARPAT 130:262147

AB Methods of preventing or reducing hearing or balance loss, damage to ear cells, weight loss, **gastrointestinal** toxicity, **neurotoxicity**, **alopecia**, and prolonging survival in patients undergoing treatment with therapeutically effective amts. of platinum-containing chemotherapeutic agents, e.g. cisplatin, are provided. Methods are also provided for preventing or reducing such symptoms in patients undergoing treatment with loop diuretics, aminoglycoside antibiotics, iron chelating agents, quinine, and quinidine, or those who have been exposed to toxic levels of noise or radiation. These methods comprise administering an effective amount of a **methionine protective agent**, e.g. D-methionine, prior to, simultaneously with, or subsequently to administration of the platinum-containing chemotherapeutic agent, loop diuretic agent, etc., or **exposure** to noise or **radiation**. Combinations of these time periods can also be employed.

IT 7439-89-6, Iron, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study) (chelating agents; **methionine** compds. to reduce toxicity of **ototoxic** drugs, noise, and radiation)

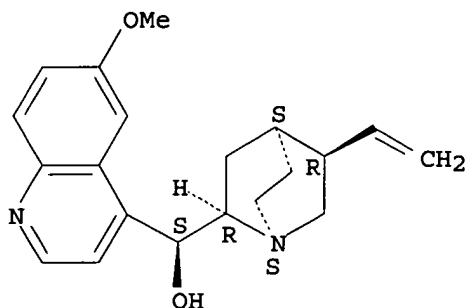
RN 7439-89-6 HCAPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

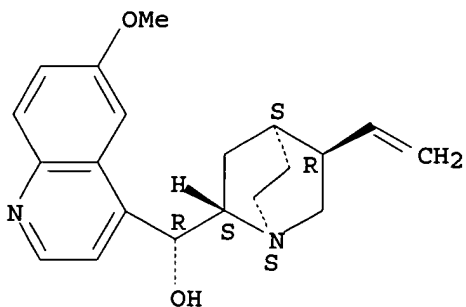
IT 56-54-2, Quinidine 130-95-0, Quinine 15663-27-1
 , Cisplatin
 RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
 (methionine compds. to reduce toxicity of ototoxic
 drugs, noise, and radiation)
 RN 56-54-2 HCAPLUS
 CN Cinchonan-9-ol, 6'-methoxy-, (9S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

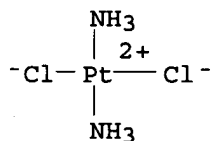


RN 130-95-0 HCAPLUS
 CN Cinchonan-9-ol, 6'-methoxy-, (8α,9R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 15663-27-1 HCAPLUS
 CN Platinum, diamminedichloro-, (SP-4-2)- (9CI) (CA INDEX NAME)



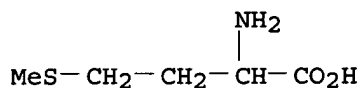
IT 59-51-8, Methionine 59-51-8D,
 Methionine, compds. 63-68-3, L-Methionine,
 biological studies 63-68-3D, L-Methionine, derivs.,
 biological studies 348-67-4, D-Methionine
 348-67-4D, D-Methionine, derivs. 502-83-0,
 Methioninol 1319-79-5 13073-35-3, Ethionine
 29908-03-0, S-Adenosyl-L-methionine

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(methionine compds. to reduce toxicity of ototoxic drugs, noise, and radiation)

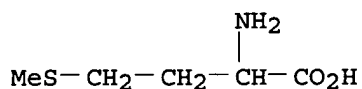
RN 59-51-8 HCAPLUS

CN Methionine (9CI) (CA INDEX NAME)



RN 59-51-8 HCAPLUS

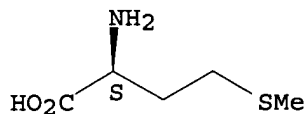
CN Methionine (9CI) (CA INDEX NAME)



RN 63-68-3 HCAPLUS

CN L-Methionine (9CI) (CA INDEX NAME)

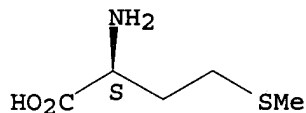
Absolute stereochemistry.



RN 63-68-3 HCAPLUS

CN L-Methionine (9CI) (CA INDEX NAME)

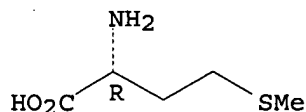
Absolute stereochemistry.



RN 348-67-4 HCAPLUS

CN D-Methionine (9CI) (CA INDEX NAME)

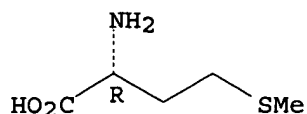
Absolute stereochemistry. Rotation (+).



RN 348-67-4 HCAPLUS

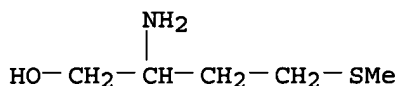
CN D-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



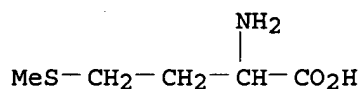
RN 502-83-0 HCAPLUS

CN 1-Butanol, 2-amino-4-(methylthio)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 1319-79-5 HCAPLUS

CN L-Methionine, hydroxy- (9CI) (CA INDEX NAME)

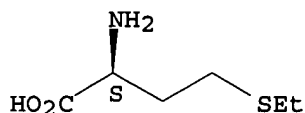


D1-OH

RN 13073-35-3 HCAPLUS

CN L-Homocysteine, S-ethyl- (9CI) (CA INDEX NAME)

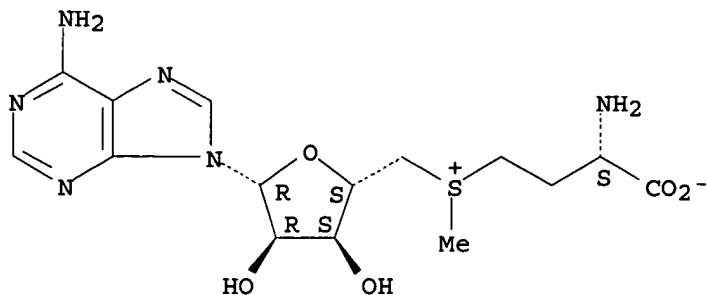
Absolute stereochemistry.



RN 29908-03-0 HCAPLUS

CN Adenosine, 5'-[[[(3S)-3-amino-3-carboxypropyl]methylsulfonio]-5'-deoxy-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

16

THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:181239 HCAPLUS

DOCUMENT NUMBER: 130:311088

TITLE: Ruminal escape, **gastrointestinal** absorption, and response of serum methionine to supplementation of liquid methionine hydroxy analog in dairy cows

AUTHOR(S): Koenig, K. M.; Rode, L. M.; Knight, C. D.; McCullough, P. R.

CORPORATE SOURCE: Lethbridge Research Centre, Agriculture and Agri-Food Canada, Lethbridge, AB, T1J 4B1, Can.

SOURCE: Journal of Dairy Science (1999), 82(2), 355-361
CODEN: JDSCAE; ISSN: 0022-0302.

PUBLISHER: American Dairy Science Association

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The bioavailability of liquid methionine hydroxy analog D,L-2-hydroxy-4-(methylthio)butanoic acid (Alimet) was evaluated in 2 expts. with 4 cannulated lactating dairy cows. In the first experiment each cow was given a daily intraruminal pulse dose of 0, 30, 60, or 90 g methionine analog for 10 days. Duodenal samples were collected at 16, 20, and 24 h after dosing for the last 5 days and pooled. The methionine analog was not detected in the duodenal content because it passed rapidly from the rumen relative to the sampling protocol. In the second experiment the cows were offered 90 g methionine analog and 600 mL Cr-EDTA solution (3.5 g Cr) mixed with ground corn for 20 min, after which any remains of the dose were placed directly into the rumen. The concns. of the analog peaked in the ruminal and duodenal fluid at 1 and 3 h, resp. The fractional rate consts. for ruminal and duodenal disappearance of the methionine analog and passage of the liquid suggest that $50.0 \pm 2.8\%$ of the analog escaped ruminal degradation and became available for intestinal absorption ($44.6 \pm 5.7\%$) or was absorbed from the omasum ($5.4 \pm 3.3\%$). **Blood serum** methionine concns. peaked 6 h after analog dosing at a level that was 3-times the predose level, indicating that methionine analog that escaped ruminal degradation was absorbed and metabolized to methionine.

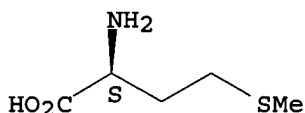
IT 63-68-3, L-Methionine, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(methionine hydroxy analog ruminal escape, **gastrointestinal** absorption and **blood serum** methionine levels in dairy cows)

RN 63-68-3 HCAPLUS

CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

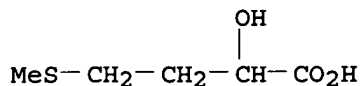


IT 583-91-5, Alimet

RL: BPR (Biological process); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); PROC (Process); USES (Uses)
(methionine hydroxy analog ruminal escape, **gastrointestinal** absorption and **blood serum** methionine levels in dairy cows)

RN 583-91-5 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:47510 HCAPLUS

DOCUMENT NUMBER: 128:227677

TITLE: Identification and stereospecificity of the first three enzymes of 3-dimethylsulfoniopropionate biosynthesis in a chlorophyte alga

AUTHOR(S): Summers, Peter S.; Nolte, Kurt D.; Cooper, Arthur J. L.; Borgeas, Heidi; Leustek, Thomas; Rhodes, David; Hanson, Andrew D.

CORPORATE SOURCE: Horticultural Sciences Department, University of Florida, Gainesville, FL, 32611, USA

SOURCE: Plant Physiology (1998), 116(1), 369-378
CODEN: PLPHAY; ISSN: 0032-0889

PUBLISHER: American Society of Plant Physiologists

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Many marine algae produce 3-dimethylsulfoniopropionate (DMSP), a potent **osmoprotective** compound whose degradation product dimethylsulfide plays a central role in the biogeochem. S cycle. Algae are known to synthesize DMSP via the four-step pathway, L-Met → 4-methylthio-2-oxobutyrate → 4-methylthio-2-hydroxybutyrate → 4-dimethylsulfonio-2-hydroxy-butyrate (DMSHB) → DMSP. Substrate-specific enzymes catalyzing the first three steps in this pathway were detected and partially characterized in cell-free exts. of the chlorophyte alga *Enteromorpha intestinalis*. The first is a 2-oxoglutarate-dependent aminotransferase, the second an NADPH-linked reductase, and the third an S-adenosylmethionine-dependent methyltransferase. Sensitive radiometric assays were developed for these enzymes, and used to show that their activities are high enough to account for the estimated in vivo flux from Met to DMSP. The activities of these enzymes in other DMSP-rich chlorophyte algae were at least as high as those in *E. intestinalis*, but were ≥20-fold lower in algae without DMSP. The reductase and methyl-transferase were specific for the D-enantiomer of 4-methylthio-2-hydroxybutyrate in vitro, and both the methyltransferase step and the step(s) converting DMSHB to DMSP were shown to prefer D-enantiomers in vivo. The intermediate DMSHB was shown to act as an **osmoprotectant**, which indicates that the first three steps of the DMSP synthesis pathway may be sufficient to confer **osmotolerance**

IT 82657-90-7, Methionine aminotransferase 204655-74-3,
NADPH-linked 4-methylthio-2-oxobutyrate reductase 204655-78-7,
D-Methylthio-2-hydroxybutyrate S-methyltransferase
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)

(identification and stereospecificity of first three enzymes of 3-dimethylsulfoniopropionate biosynthesis in a chlorophyte alga)

RN 82657-90-7 HCAPLUS

CN Aminotransferase, L-methionine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 204655-74-3 HCAPLUS

CN Reductase, 4-methylthio-2-oxobutyrate (reduced nicotinamide adenine dinucleotide phosphate) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 204655-78-7 HCAPLUS

CN Methyltransferase, D-methylthio-2-hydroxybutyrate S- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 63-68-3, L-Methionine, biological studies 24787-94-8

39638-34-1 48042-96-2 204575-39-3

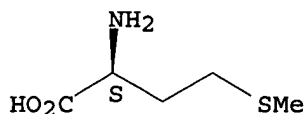
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(identification and stereospecificity of first three enzymes of 3-dimethylsulfoniopropionate biosynthesis in a chlorophyte alga)

RN 63-68-3 HCAPLUS

CN L-Methionine (9CI) (CA INDEX NAME)

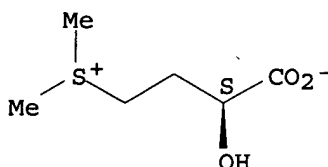
Absolute stereochemistry.



RN 24787-94-8 HCAPLUS

CN Sulfonium, (3-carboxy-3-hydroxypropyl)dimethyl-, inner salt, (S)- (9CI) (CA INDEX NAME)

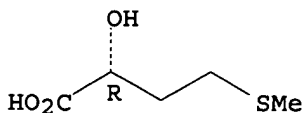
Absolute stereochemistry.



RN 39638-34-1 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)-, (2R)- (9CI) (CA INDEX NAME)

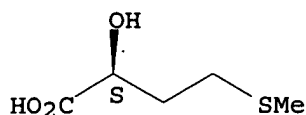
Absolute stereochemistry.



RN 48042-96-2 HCAPLUS

CN Butanoic acid, 2-hydroxy-4-(methylthio)-, (2S)- (9CI) (CA INDEX NAME)

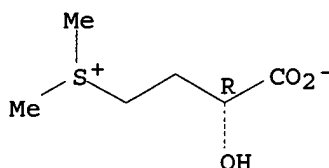
Absolute stereochemistry.



RN 204575-39-3 HCAPLUS

CN Sulfonium, (3-carboxy-3-hydroxypropyl)dimethyl-, inner salt, (R)- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

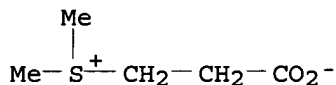


IT 7314-30-9, 3-Dimethylsulfoniopropionate

RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL
(Biological study); FORM (Formation, nonpreparative)
(identification and stereospecificity of first three enzymes of
3-dimethylsulfoniopropionate biosynthesis in a chlorophyte alga)

RN 7314-30-9 HCAPLUS

CN Sulfonium, (2-carboxyethyl)dimethyl-, inner salt (9CI) (CA INDEX NAME)

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:494118 HCAPLUS

DOCUMENT NUMBER: 119:94118

TITLE: Fatty acid salt preparations containing other
biologically active materials for use as feed
supplementsINVENTOR(S): Vinci, Alfredo; Lajoie, M. Stephen; Sweeney, Thomas
F.; Cummings, Kenneth R.

PATENT ASSIGNEE(S): Church and Dwight Co., Inc., USA

SOURCE: PCT Int. Appl., 16 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

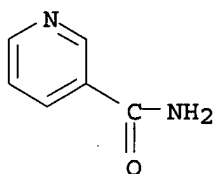
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

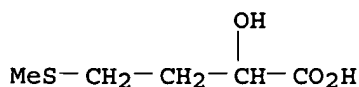
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9310669	A1	19930610	WO 1992-US7337	19920904
W: AT, AU, BB, BG, BR, CA, CH, CS, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MG, MN, MW, NL, NO, PL, RO, RU, SD, SE				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE, BF,				

BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG
 AU 9225774 A1 19930628 AU 1992-25774 19920904
 EP 619706 A1 19941019 EP 1992-919798 19920904
 EP 619706 B1 19991124
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, SE
 BR 9206859 A 19960416 BR 1992-6859 19920904
 AT 186817 E 19991215 AT 1992-919798 19920904
 CA 2124925 C 20011002 CA 1992-2124925 19920904
 US 5456927 A 19951010 US 1993-149305 19931109
 WO 9512987 A1 19950518 WO 1994-US9137 19940822
 W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB,
 GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW,
 NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN
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 NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
 AU 9476315 A1 19950529 AU 1994-76315 19940822
 PRIORITY APPLN. INFO.:
 US 1991-802261 A 19911204
 US 1993-149305 19931109
 US 1993-7013 19930121
 WO 1992-US7337 A 19920904
 WO 1994-US9137 W 19940822
 AB The salts of C14-22 fatty acids for use as feed supplements for cattle are prepared with simultaneous incorporation of other feed supplements. By using the alkali earth metal salts of fatty acids, the fatty acids and the incorporated supplements have rumen bypass **protection** and so do not adversely affect rumen microflora. A series of feed supplements 35 were included in a stirred reaction mixture including palm oil fatty acids 700, calcium oxide 100 and water 300 g. During the highly exothermic reaction nicotinic acid, methionine, lysine, or choline were broken down to a significant extent, but methionine hydroxy analog and nicotinamide were unaffected.
 IT 98-92-0, Nicotinamide 583-91-5
 RL: BIOL (Biological study)
 (as feed supplement, rumen bypass-**protected**, preparation of fatty acid calcium salts in relation to)
 RN 98-92-0 HCAPLUS
 CN 3-Pyridinecarboxamide (9CI) (CA INDEX NAME)



RN 583-91-5 HCAPLUS
 CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



IT 1305-78-8, Calcium oxide, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactions of, in preparation fatty acid calcium salts, rumen bypass-**protected** feed supplements in relation to)

RN 1305-78-8 HCAPLUS
 CN Calcium oxide (CaO) (9CI) (CA INDEX NAME)

Ca=O

L50 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1990:191414 HCAPLUS

DOCUMENT NUMBER: 112:191414

TITLE: L-Methionine antagonism of cis-platinum nephrotoxicity

AUTHOR(S): Basinger, Mark A.; Jones, Mark M.; Holscher, Myron A.

CORPORATE SOURCE: Cent. Mol. Toxicol., Vanderbilt Univ., Nashville, TN, 37235, USA

SOURCE: Toxicology and Applied Pharmacology (1990), 103(1), 1-15

CODEN: TXAPA9; ISSN: 0041-008X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB L-Methionine administered simultaneously with cis-platinum (CDDP) i.v. results in a significant reduction of the nephrotoxicity normally associated with

CDDP without any apparent effect on the antineoplastic activity for rats bearing the Walker 256 carcinosarcoma. CDDP given with L-methionine at a 1:20 mol ratio can be administered to rats at doses up to 35 mg/kg i.v. with the survival of all treated animals (3/3) and up to 56 mg/kg i.v. (bolus injection) with the survival of 3/6 animals, while CDDP administered alone at these levels is lethal. A reduced level of **protection** against the nephrotoxicity was also achieved at lower mole ratios of L-methionine to CDDP. Renal function was monitored using BUN and serum creatinine levels, and **gastrointestinal** toxicity by weight changes during the course of the expts. A histopathol. examination

of

the kidneys was also performed to evaluate the **protection** provided by L-methionine. Under the conditions used, the reaction between L-methionine and CDDP does not appear to proceed so rapidly as to interfere with the antitumor activity of the CDDP. The examination of structural analogs as agents for the control of CDDP-induced nephrotoxicity revealed that the C-S-C-group is the essential group for the **protective** action in these structures. Although L-methionine can provide renal **protection** in rats given high doses of CDDP, it does not prevent the accumulation of Pt in the kidney.

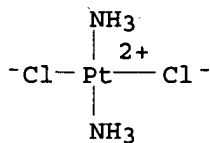
IT 15663-27-1, Cisplatinum

RL: BIOL (Biological study)

(antitumor activity and kidney toxicity of, methionine and its analogs effect on, structure in relation to)

RN 15663-27-1 HCAPLUS

CN Platinum, diamminedichloro-, (SP-4-2)- (9CI) (CA INDEX NAME)



IT 63-68-3, L-Methionine, biological studies 327-57-1,

L-Norleucine 583-91-5 2899-37-8, L-Methioninol

3226-65-1, L-Methionine sulfoxide 13073-35-3

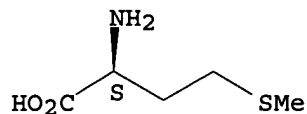
RL: BIOL (Biological study)

(antitumor activity and nephrotoxicity of cisplatin response to)

RN 63-68-3 HCAPLUS

CN L-Methionine (9CI) (CA INDEX NAME)

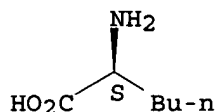
Absolute stereochemistry.



RN 327-57-1 HCAPLUS

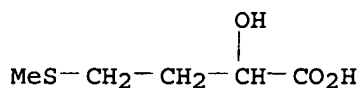
CN L-Norleucine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 583-91-5 HCAPLUS

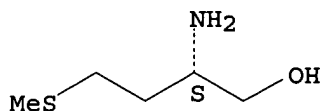
CN Butanoic acid, 2-hydroxy-4-(methylthio)- (9CI) (CA INDEX NAME)



RN 2899-37-8 HCAPLUS

CN 1-Butanol, 2-amino-4-(methylthio)-, (2S)- (9CI) (CA INDEX NAME)

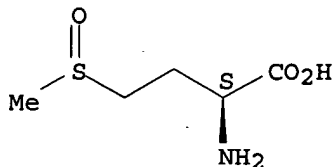
Absolute stereochemistry. Rotation (-).



RN 3226-65-1 HCAPLUS

CN Butanoic acid, 2-amino-4-(methylsulfinyl)-, (2S)- (9CI) (CA INDEX NAME)

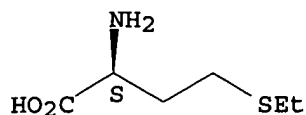
Absolute stereochemistry.



RN 13073-35-3 HCAPLUS

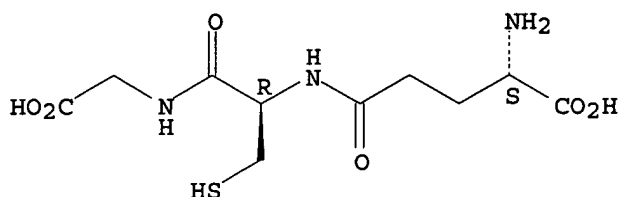
CN L-Homocysteine, S-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 70-18-8, Glutathione, biological studies
 RL: BIOL (Biological study)
 (cisplatinum antitumor activity and nephrotoxicity response to
 methionine and its analogs in relation to)
 RN 70-18-8 HCAPLUS
 CN Glycine, L-γ-glutamyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



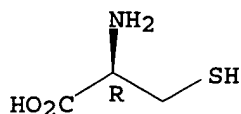
L50 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1989:403357 HCAPLUS
 DOCUMENT NUMBER: 111:3357
 TITLE: Metabolic indexes of proteolysis in dog blood
 serum at early times after
 whole-body uniform γ-irradiation
 AUTHOR(S): Konnova, L. A.; Teslenko, V. M.; Komar, V. E.
 CORPORATE SOURCE: Cent. Res. Inst. Roentgenol. Radiol., Leningrad, USSR
 SOURCE: Radiobiologiya (1989), 29(2), 221-5
 CODEN: RADOA8; ISSN: 0033-8192
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 AB The free amino acid concentration and proteinase inhibitor content were studied during the 1st 48 h following whole-body uniform γ-irradiation of dogs (LD30/50 and LD90/45). The contribution of metabolic profile features to individual radiosensitivity is discussed on the basis of anal. of the initial level of metabolic indexes in animals after irradiation. A comparison of the dynamics of changes in the indexes under study in the animals which died after exposure to different radiation doses suggested an important role of early hyperactivation of proteolysis in the development of a metabolic decompensation which promoted the fatal outcome of the affection.
 IT 52-90-4, Cysteine, biological studies 56-40-6, Glycine, biological studies 56-41-7, Alanine, biological studies 56-45-1, Serine, biological studies 56-84-8, L-Aspartic acid, biological studies 56-86-0, L-Glutamic acid, biological studies 56-87-1, L-Lysine, biological studies 60-18-4, Tyrosine, biological studies 61-90-5, Leucine, biological studies 63-68-3, Methionine, biological studies 63-91-2, Phenylalanine, biological studies 71-00-1, Histidine, biological studies 72-18-4, Valine, biological studies 72-19-5, Threonine, biological studies 73-22-3

, Tryptophan, biological studies 73-32-5, Isoleucine, biological studies 74-79-3, Arginine, biological studies 147-85-3
 , Proline, biological studies 37205-61-1, Proteinase inhibitor
 RL: BIOL (Biological study)
 (of blood serum, γ -ray effect on, proteolysis
 in relation to)

RN 52-90-4 HCAPLUS

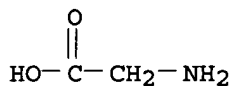
CN L-Cysteine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 56-40-6 HCAPLUS

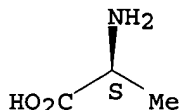
CN Glycine (8CI, 9CI) (CA INDEX NAME)



RN 56-41-7 HCAPLUS

CN L-Alanine (9CI) (CA INDEX NAME)

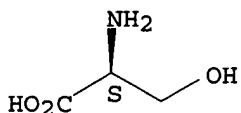
Absolute stereochemistry. Rotation (+).



RN 56-45-1 HCAPLUS

CN L-Serine (9CI) (CA INDEX NAME)

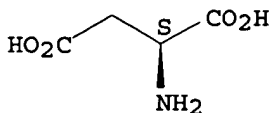
Absolute stereochemistry. Rotation (-).



RN 56-84-8 HCAPLUS

CN L-Aspartic acid (9CI) (CA INDEX NAME)

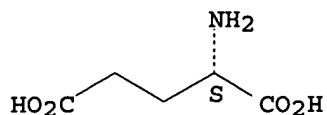
Absolute stereochemistry. Rotation (+).



RN 56-86-0 HCAPLUS

CN L-Glutamic acid (9CI) (CA INDEX NAME)

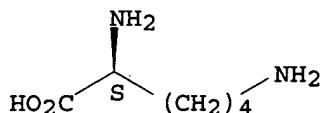
Absolute stereochemistry.



RN 56-87-1 HCAPLUS

CN L-Lysine (9CI) (CA INDEX NAME)

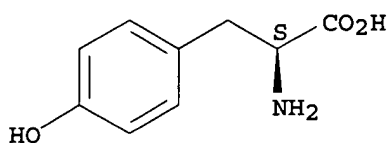
Absolute stereochemistry.



RN 60-18-4 HCAPLUS

CN L-Tyrosine (9CI) (CA INDEX NAME)

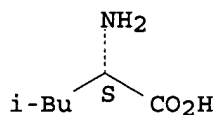
Absolute stereochemistry. Rotation (-).



RN 61-90-5 HCAPLUS

CN L-Leucine (9CI) (CA INDEX NAME)

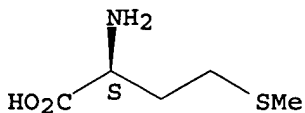
Absolute stereochemistry. Rotation (+).



RN 63-68-3 HCAPLUS

CN L-Methionine (9CI) (CA INDEX NAME)

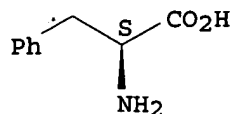
Absolute stereochemistry.



RN 63-91-2 HCAPLUS

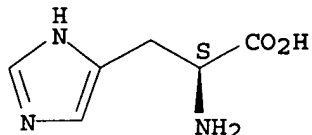
CN L-Phenylalanine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



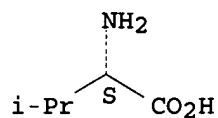
RN 71-00-1 HCAPLUS
CN L-Histidine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



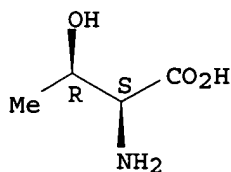
RN 72-18-4 HCAPLUS
CN L-Valine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



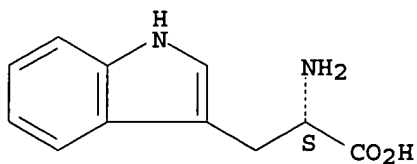
RN 72-19-5 HCAPLUS
CN L-Threonine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



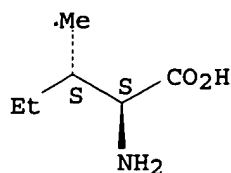
RN 73-22-3 HCAPLUS
CN L-Tryptophan (9CI) (CA INDEX NAME)

Absolute stereochemistry.



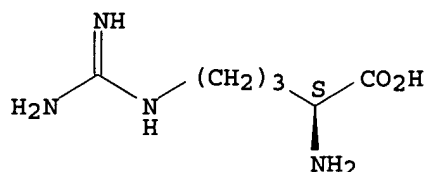
RN 73-32-5 HCAPLUS
CN L-Isoleucine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



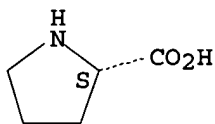
RN 74-79-3 HCAPLUS
CN L-Arginine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 147-85-3 HCAPLUS
CN L-Proline (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 37205-61-1 HCAPLUS
CN Proteinase inhibitor (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L50 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1981:11282 HCAPLUS

DOCUMENT NUMBER: 94:11282

TITLE: Opioid peptides as brain neurotransmitters
with therapeutic potential: basic and clinical
studies

AUTHOR(S): Frederickson, Robert C. A.; Smithwick, Edward L.;
Henry, David P.

CORPORATE SOURCE: Lilly Res. Lab., Eli Lilly and Co., Indianapolis, IN,
46285, USA

SOURCE: International Brain Research Organization Monograph
Series (1980), 7 (Neuropept. Neural Transm.), 227-35
CODEN: IBRSDZ; ISSN: 0361-0462

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In the mouse hot plate assay for analgesic activity, LY 127623 (I) [66960-34-7] was 100-fold more potent than morphine and at least 30,000-fold more potent than methionine-enkephalin [58569-55-4] when injected intraventricularly. This analgesic activity was antagonized by naloxone. I was active, after s.c. or i.v. administration, in the mouse hot plate, mouse writhing, and rat tail heat tests for analgesia. I produced little or no phys. dependence, and it had less respiratory

depressant activity than did morphine. In 4 normal males, I (0.5-90 mg, i.m.) had no adverse clin. effects as monitored by routine clin. chemical, electrolytes, urinalysis, hemograms, or ECG. No clin. relevant effects were observed on blood pressure or heart rate, even at the dose of 90 mg. At doses >12.5 mg, however, all subjects reported a mild retroorbital burning sensation which began at 1-3 min after drug administration and subsequently progressed to nasal congestion and dry mouth which were of 3-4 h duration. Subjects reported a heavy sensation in the extremities which lasted about 1 h. Emotional detachment and conjunctival injection were also observed. No flushing or changes in bowel sounds were noted. Flare or wheal formation did not occur after intradermal administration. A prompt increase in serum prolactin [9002-62-4], but no alteration in growth hormone [9002-72-6], was observed after I administration. Differences in the pharmacol. profile of the opioid peptides and narcotic analgesics is suggested.

IT 58569-55-4 66960-34-7

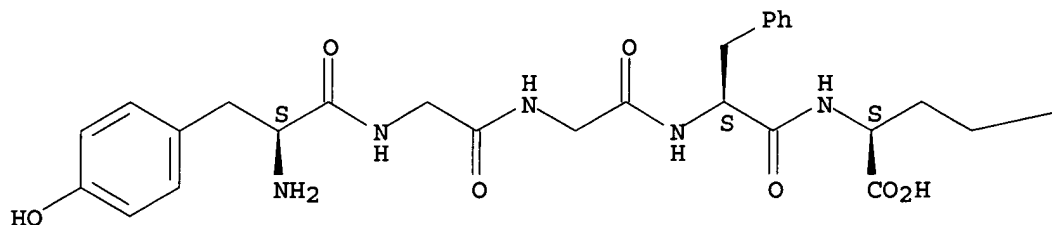
RL: BIOL (Biological study)
(analgesia from, evaluation of)

RN 58569-55-4 HCAPLUS

CN 1-5-Adrenorphin (human) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

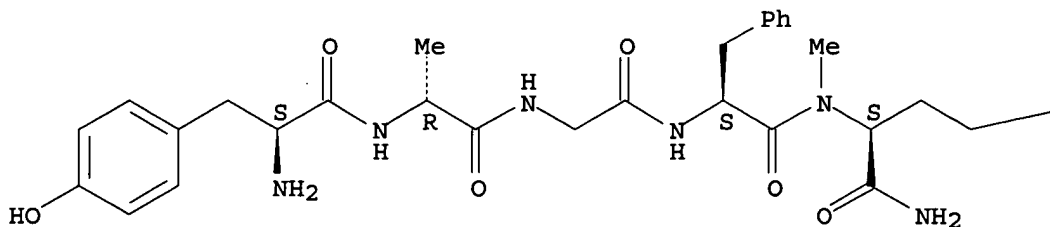
—SMe

RN 66960-34-7 HCAPLUS

CN L-Methioninamide, L-tyrosyl-D-alanylglycyl-L-phenylalanyl-N2-methyl- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

—SMe

IT 9002-62-4, biological studies 9002-72-6
RL: BIOL (Biological study)
(of **blood serum**, enkephalins effect on, analgesia
in relation to)

RN 9002-62-4 HCAPLUS

CN Prolactin (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9002-72-6 HCAPLUS

CN Somatotropin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

=> d his ful

FILE 'HCAPLUS' ENTERED AT 14:11:51 ON 01 OCT 2004

E CAMPBELL, KATHLEEN/AU

E CAMPBELL KATHLEEN/AU

L1 16 SEA ABB=ON ("CAMPBELL KATHLEEN"/AU OR "CAMPBELL KATHLEEN
A"/AU OR "CAMPBELL KATHLEEN C M"/AU)

L2 3 SEA ABB=ON L1 AND ?PLATINUM?

D TI 1-3

SELECT RN L2 1-3

FILE 'REGISTRY' ENTERED AT 14:13:06 ON 01 OCT 2004

L3 41 SEA ABB=ON (59-51-8/BI OR 348-67-4/BI OR 63-68-3/BI OR
13073-35-3/BI OR 1319-79-5/BI OR 15663-27-1/BI OR 502-83-0/BI
OR 114579-59-8/BI OR 130-95-0/BI OR 14096-51-6/BI OR 141610-50-
6/BI OR 14215-58-8/BI OR 149055-58-3/BI OR 14913-33-8/BI OR
20115-64-4/BI OR 29908-03-0/BI OR 41575-93-3/BI OR 41575-94-4/B
I OR 56-54-2/BI OR 62928-11-4/BI OR 64363-09-3/BI OR 67254-31-3
/BI OR 7439-89-6/BI OR 74790-08-2/BI OR 114-07-8/BI OR
1403-66-3/BI OR 1404-04-2/BI OR 1404-90-6/BI OR 148977-78-0/BI
OR 32986-56-4/BI OR 37517-28-5/BI OR 38780-43-7/BI OR 41666-77-
7/BI OR 56391-56-1/BI OR 57-92-1/BI OR 59-01-8/BI OR 6094-76-4/
BI OR 6379-56-2/BI OR 7440-06-4/BI OR 7542-37-2/BI OR 88483-99-
2/BI)

FILE 'HCAPLUS' ENTERED AT 14:13:25 ON 01 OCT 2004

L4 3 SEA ABB=ON L2 AND L3

L5 2 SEA ABB=ON L1 AND ?RADIAT?(3A)?TOXIC?
SELECT RN L5 1-2

FILE 'REGISTRY' ENTERED AT 14:16:19 ON 01 OCT 2004

L6 38 SEA ABB=ON (59-51-8/BI OR 348-67-4/BI OR 63-68-3/BI OR
130-95-0/BI OR 13073-35-3/BI OR 1319-79-5/BI OR 15663-27-1/BI
OR 29908-03-0/BI OR 502-83-0/BI OR 56-54-2/BI OR 7439-89-6/BI
OR 114-07-8/BI OR 114579-59-8/BI OR 1403-66-3/BI OR 1404-04-2/B
I OR 1404-90-6/BI OR 14096-51-6/BI OR 141610-50-6/BI OR
14215-58-8/BI OR 148977-78-0/BI OR 149055-58-3/BI OR 14913-33-8
/BI OR 20115-64-4/BI OR 32986-56-4/BI OR 37517-28-5/BI OR
41575-93-3/BI OR 41575-94-4/BI OR 41666-77-7/BI OR 56391-56-1/B
I OR 57-92-1/BI OR 59-01-8/BI OR 6094-76-4/BI OR 62928-11-4/BI
OR 6379-56-2/BI OR 64363-09-3/BI OR 67254-31-3/BI OR 74790-08-2
/BI OR 7542-37-2/BI)

FILE 'HCAPLUS' ENTERED AT 14:16:28 ON 01 OCT 2004

L7 2 SEA ABB=ON L5 AND L6

FILE 'REGISTRY' ENTERED AT 14:49:40 ON 01 OCT 2004

L8 STR

L9 41 SEA SSS SAM L8

FILE 'HCAPLUS' ENTERED AT 14:53:41 ON 01 OCT 2004

L10 2202693 SEA ABB=ON (?OTOTOX? OR ?OTOLOG? OR ?OTOLARYNG? OR EAR? OR
?NEUROTOX? OR ?NEURO? OR ?ALOPECIA? OR ?GASTROINTEST? OR
?INTEST? OR ?RADIATION?)

L11 11459 SEA ABB=ON L10 AND (L1 OR ?METHIONINE?)

FILE 'REGISTRY' ENTERED AT 15:04:26 ON 01 OCT 2004

L12 0 SEA ABB=ON L9 AND L11

FILE 'HCAPLUS' ENTERED AT 15:05:03 ON 01 OCT 2004

L13 0 SEA ABB=ON L9 AND L11
L14 3986 SEA ABB=ON L10 AND (L1 OR ?METHIONINE?) (L) (?PREVENT? OR
?PROTECT? OR ?INHIBIT? OR ?CONTROL?)
L15 521 SEA ABB=ON L10 AND (L1 OR ?METHIONINE?) (L) ?PREVENT?
SELECT RN L15 1-521
L16 52 SEA ABB=ON L15 AND ?METHOD?
SELECT RN L16 1-52

FILE 'REGISTRY' ENTERED AT 15:09:25 ON 01 OCT 2004

L17 687 SEA ABB=ON (63-68-3/BI OR 56-40-6/BI OR 70-18-8/BI OR
348-67-4/BI OR 29908-03-0/BI OR 56-87-1/BI OR 59-51-8/BI OR
74-79-3/BI OR 50-81-7/BI OR 72-19-5/BI OR 147-85-3/BI OR
15663-27-1/BI OR 56-41-7/BI OR 56-45-1/BI OR 60-18-4/BI OR
61-90-5/BI OR 63-91-2/BI OR 73-22-3/BI OR 7439-95-4/BI OR
13073-35-3/BI OR 1319-79-5/BI OR 502-83-0/BI OR 56-86-0/BI OR
59-02-9/BI OR 59-30-3/BI OR 71-00-1/BI OR 72-18-4/BI OR
73-32-5/BI OR 7439-89-6/BI OR 12001-79-5/BI OR 125978-95-2/BI
OR 1406-18-4/BI OR 3211-76-5/BI OR 50-99-7/BI OR 52-90-4/BI OR
541-15-1/BI OR 56-84-8/BI OR 56-85-9/BI OR 56-89-3/BI OR
6027-13-0/BI OR 616-91-1/BI OR 62683-29-8/BI OR 70-26-8/BI OR
7235-40-7/BI OR 7440-66-6/BI OR 7723-14-0/BI OR 107-35-7/BI OR
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OR 100-11-8/BI OR 10043-83-1/BI OR 10102-18-8/BI OR 10417-94-4/
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OR 109-89-7/BI OR 110-60-1/BI OR 11043-90-6/BI OR 11096-26-7/BI
OR 11103-57-4/BI OR 11114-20-8/BI OR 11138-66-2/BI OR
1118-68-9/BI OR 114-07-8/BI OR 1142-20-7/BI OR 115832-58-1/BI
OR 116111-18-3/BI OR 116788-37-5/BI OR 118421-50-4/BI OR
119-44-8/BI OR 1190-94-9/BI OR 12067-99-1/BI OR 121181-53-1/BI
OR 124229-29-4/BI OR 128-37-0/BI OR 128561-10-4/BI OR 130106-12
-6/BI OR 130939-66-1/BI OR 1310-58-3/BI
L18 0 SEA ABB=ON L9 AND L17

FILE 'HCAPLUS' ENTERED AT 15:12:04 ON 01 OCT 2004

L19 1521162 SEA ABB=ON (?OTOTOX? OR ?OTOLOG? OR ?OTOLARYNG? OR EAR? OR
?NEUROTOX? OR ?NEURO? OR ?ALOPECIA? OR ?GASTROINTEST? OR
?INTEST? OR ?REDUC?(3A)?SURVIV?)
L20 1718 SEA ABB=ON L19 AND ?RADIAT?(3A)?EXPOS?
L21 9 SEA ABB=ON L20 AND (L1 OR ?METHIONINE?)

FILE 'REGISTRY' ENTERED AT 15:24:07 ON 01 OCT 2004

L22 STR L8
L23 0 SEA SSS SAM L22
L24 STR L22
L25 0 SEA SSS SAM L24
SAV L24 COO432L24/L

FILE 'HCAPLUS' ENTERED AT 16:06:52 ON 01 OCT 2004

SAV L16 COO432L16/A

FILE 'REGISTRY' ENTERED AT 16:54:22 ON 01 OCT 2004

FILE 'HCAPLUS' ENTERED AT 16:54:49 ON 01 OCT 2004

L26 SET SMARTSELECT ON
SEL L16 1- RN : 687 TERMS
SET SMARTSELECT OFF

FILE 'REGISTRY' ENTERED AT 16:54:52 ON 01 OCT 2004

L27 687 SEA ABB=ON L26
L28 0 SEA SUB=L27 SSS SAM L22
L29 0 SEA SUB=L28 SSS FUL L22

FILE 'HCAPLUS' ENTERED AT 16:56:33 ON 01 OCT 2004

L30 SET SMARTSELECT ON
SEL L15 1- RN : 4853 TERMS
SET SMARTSELECT OFF

FILE 'REGISTRY' ENTERED AT 16:56:53 ON 01 OCT 2004

L31 4853 SEA ABB=ON L30
L32 0 SEA SUB=L31 SSS SAM L22
L33 92 SEA SSS FUL L22
L34 1 SEA SUB=L31 SSS FUL L22

FILE 'HCAPLUS' ENTERED AT 16:59:06 ON 01 OCT 2004

L35 420 SEA ABB=ON L34

FILE 'HCAPLUS' ENTERED AT 17:00:38 ON 01 OCT 2004

L36 SET SMARTSELECT ON
SEL L14 1- RN : 45551 TERMS
SET SMARTSELECT OFF

FILE 'REGISTRY' ENTERED AT 17:03:11 ON 01 OCT 2004

L37 45551 SEA ABB=ON L36
L38 0 SEA SUB=L37 SSS SAM L22
L39 8 SEA SUB=L37 SSS FUL L22

FILE 'HCAPLUS' ENTERED AT 17:13:11 ON 01 OCT 2004

L40 517 SEA ABB=ON L39
L41 43 SEA ABB=ON L40 AND (?OTOTOXICITY? OR ?OTOL? OR EAR? OR
?NEUROTOX? OR ?NE D AU 1-43
L42 0 SEA ABB=ON L41 AND ?RADIAT?
L43 52 SEA ABB=ON L41 OR L21

FILE 'REGISTRY' ENTERED AT 17:19:08 ON 01 OCT 2004

L44 815 SEA ABB=ON (583-91-5/BI OR 63-68-3/BI OR 66960-34-7/BI OR
59-51-8/BI OR 56-87-1/BI OR 61-90-5/BI OR 63631-40-3/BI OR
63-91-2/BI OR 64854-64-4/BI OR 74-79-3/BI OR 13073-35-3/BI OR
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50-99-7/BI OR 56-40-6/BI OR 57-13-6/BI OR 57-27-2/BI OR
58569-55-4/BI OR 60-18-4/BI OR 60617-12-1/BI OR 61090-95-7/BI
OR 71-00-1/BI OR 72-18-4/BI OR 72-19-5/BI OR 73-22-3/BI OR
73-32-5/BI OR 9000-07-1/BI OR 9000-30-0/BI OR 9000-40-2/BI OR
9000-65-1/BI OR 9000-69-5/BI OR 9001-92-7/BI OR 9002-72-6/BI
OR 9004-34-6/BI OR 9005-25-8/BI OR 101-26-8/BI OR 11138-66-2/BI
OR 114-80-7/BI OR 114949-22-3/BI OR 117147-70-3/BI OR
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OR 135686-79-2/BI OR 139691-76-2/BI OR 139803-70-6/BI OR
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 140879-24-9/BI OR 142008-29-5/BI OR 142805-58-1/BI OR 144713-50
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 146068-56-6/BI OR 147-85-3/BI OR 148448-81-1/BI OR 149318-04-7/
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 152347-85-8/BI OR 152651-13-3/BI OR 15307-79-6/BI OR 15307-86-5
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 -1/BI OR 158129-99-8/BI OR 158159-22-9/BI OR 158278-53-6/BI OR
 160475-72-9/BI OR 164952-58-3/BI OR 166836-11-9/BI OR 166852-06
 -8/BI OR 167712-81-4/BI OR 168658-56-8/BI OR 170319-39-8/BI OR
 170673-66-2/BI OR 172185-42-1/BI OR 172306-54-6/BI OR 173661-84
 -2/BI OR 173891-44-6/BI OR 174053-19-1/BI OR 174518-29-7/BI OR
 175524-88-6/BI OR 177966-18-6/BI OR 179725-25-8/BI OR 180448-36
 -6/BI OR 181726-44-3/BI OR 182179-65-3/BI OR 184673-20-9/BI OR
 1

FILE 'HCAPLUS' ENTERED AT 17:20:41 ON 01 OCT 2004

L45	51	SEA	ABB=ON	L43	AND	L44	<i>51 cit's from CA Plus</i>
L46	0	SEA	ABB=ON	L45	AND	?BLOOD? (W) ?SERUM? (L) ?PARENT?	
L47	4	SEA	ABB=ON	L45	AND	?BLOOD? (W) ?SERUM?	
L48	0	SEA	ABB=ON	L45	AND	?PARENT? (W) ?ADMIN?	
L49	5	SEA	ABB=ON	L45	AND	?PROTECT?	
L50	9	SEA	ABB=ON	L47	OR	L49	<i>9 cit's with "blood serum" highlighted</i>

=> d ibib abs hitstr 153 1-9

L53 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:205260 HCAPLUS

DOCUMENT NUMBER: 140:296949

TITLE: Tolerability, pharmacokinetics, and serum bactericidal activity of intravenous dalbavancin in healthy volunteers

AUTHOR(S): Leighton, Anton; Gottlieb, Alice Bendix; Dorr, Mary Beth; Jabes, Daniela; Mosconi, Giorgio; VanSaders, Claudia; Mroszczak, Edward J.; **Campbell, Kathleen C. M.**; Kelly, Ellen

CORPORATE SOURCE: Vicuron Pharmaceuticals, Inc., King of Prussia, PA, 19406, USA

SOURCE: Antimicrobial Agents and Chemotherapy (2004), 48(3), 940-945

CODEN: AMACCQ; ISSN: 0066-4804

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Fifty-two healthy adult male and female volunteers were enrolled in this double-blind study to determine the maximum tolerated dose, characterize the pharmacokinetics, and obtain serum bactericidal activity (SBA) data for i.v. dalbavancin. Subjects were assigned to single- or multiple-dose groups and randomized to receive dalbavancin or placebo i.v. over 30 min. Doses started at 140 mg in the single-dose group and with a 300-mg loading dose (LD), followed by six daily 30-mg maintenance doses (MDs), in the multiple-dose cohort and escalated to a 1,120-mg single dose and a 1,000-mg LD and 100-mg MD regimen. Plasma, urine, and skin blister fluid aspirate drug concns. were measured, and pharmacokinetic parameters were determined via noncompartmental methods. SBA against methicillin-resistant *Staphylococcus aureus* (MRSA) was determined at several time points. Adverse events and changes from the baseline for laboratory data, electrocardiograms, audiol. assessments, phys. exams., and vital signs were assessed. Concns. increased in proportion to the dose. Steady-state concns. were achieved by day 3 with the 10:1 LD-MD regimen. The half-life averaged 181 h, and the mean volume of distribution and clearance were 9.75 L and 0.0473 L/h, resp. Mean values were similar in all groups and in males and females. The portion of the dose excreted renally averaged 33.5%. Bactericidal activity was demonstrated in serum at 7 days in all subjects receiving single doses of ≥ 500 mg. All doses were well tolerated. Dose-limiting toxicity was not encountered. No changes in auditory or vestibular function occurred. The long half-life and maintenance of SBA against MRSA for 1 wk suggest that weekly dosing may be feasible.

IT 171500-79-1, Dalbavancin

RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

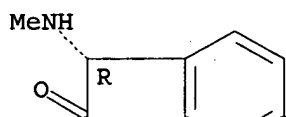
(tolerability, pharmacokinetics, and bactericidal activity of i.v. dalbavancin in healthy volunteers)

RN 171500-79-1 HCAPLUS

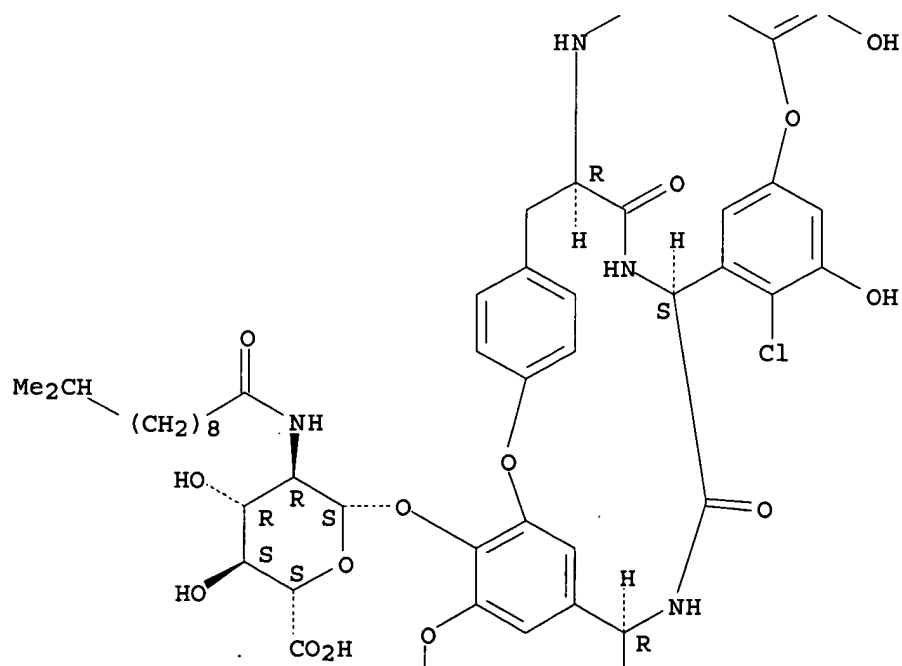
CN Ristomycin A aglycone, 5,31-dichloro-38-de(methoxycarbonyl)-7-demethyl-19-deoxy-56-O-[2-deoxy-2-[(10-methyl-1-oxoundecyl)amino]- β -D-glucopyranuronosyl]-38-[[[3-(dimethylamino)propyl]amino]carbonyl]-42-O- α -D-mannopyranosyl-N15-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

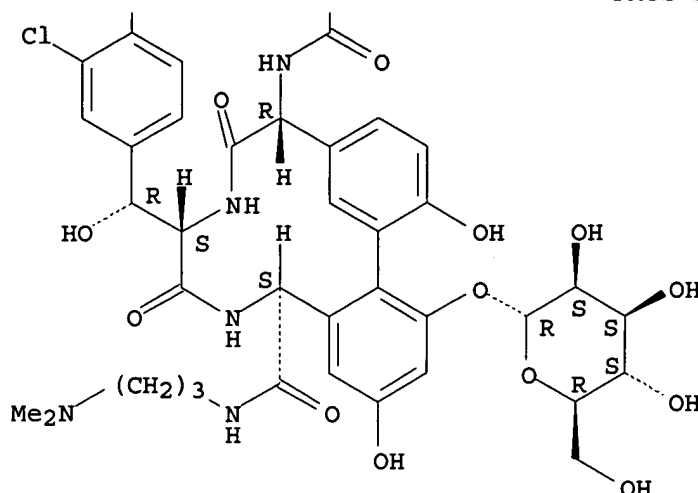
PAGE 1-A



PAGE 2-A



PAGE 3-A



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:738271 HCAPLUS

DOCUMENT NUMBER: 138:396100

TITLE: Enhancing Intrinsic Cochlear Stress Defenses to Reduce Noise-Induced Hearing Loss

AUTHOR(S): Kopke, Richard D.; Coleman, John K. M.; Liu, Jianzhong; **Campbell, Kathleen C. M.**; Riffenburgh, Robert H.

CORPORATE SOURCE: Dep. Defense Spatial Orientation Center, Naval Medical Center San Diego, San Diego, CA, USA

SOURCE: Laryngoscope (2002), 112(9), 1515-1532

CODEN: LARYA8; ISSN: 0023-852X

PUBLISHER: Lippincott Williams & Wilkins

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Oxidative stress plays a substantial role in the genesis of noise-induced cochlear injury that causes permanent hearing loss. We present the results of three different approaches to enhance intrinsic cochlear defense mechanisms against oxidative stress. This article explores, through the following set of hypotheses, some of the postulated causes of noise-induced cochlear oxidative stress (NICOS) and how noise-induced cochlear damage may be reduced pharmacol. (1) NICOS is in part related to defects in mitochondrial bioenergetics and biogenesis. Therefore, NICOS can be reduced by acetyl-L-carnitine (ALCAR), an endogenous mitochondrial membrane compound that helps maintain mitochondrial bioenergetics and biogenesis in the face of oxidative stress. (2) A contributing factor in NICOS injury is glutamate **excitotoxicity**, which can be reduced by antagonizing the action of cochlear N-methyl-D-aspartate (NMDA) receptors using carbamathione, which acts as a glutamate antagonist. (3) Noise-induced hearing loss (NIHL) may be characterized as a cochlear-reduced glutathione (GSH) deficiency state; therefore, strategies to enhance cochlear GSH levels may reduce noise-induced cochlear injury. The objective of this study was to document the reduction in noise-induced hearing and hair cell loss, following application of ALCAR, carbamathione, and a GSH repletion drug D-methionine (MET), to a model of noise-induced

hearing loss. This was a prospective, blinded observer study using the above-listed agents as modulators of the noise-induced cochlear injury response in the species *Chinchilla laniger*. Adult *C. laniger* had baseline-hearing thresholds determined by auditory brainstem response (ABR) recording. The animals then received injections of saline or saline plus active exptl. compound starting before and continuing after a 6-h 105 dB SPL continuous 4-kHz octave band noise exposure. ABRs were obtained immediately after noise exposure and weekly for 3 wk. After euthanization, cochlear hair cell counts were obtained and analyzed. ALCAR administration reduced noise-induced threshold shifts. Three weeks after noise exposure, no threshold shift at 2 to 4 kHz and <10 dB threshold shifts were seen at 6 to 8 kHz in ALCAR-treated animals compared with 30 to 35 dB in control animals. ALCAR treatment reduced both inner and outer hair cell loss. OHC loss averaged <10% for the 4- to 10-kHz region in ALCAR-treated animals and 60% in saline-injected-noise-exposed control animals. Noise-induced threshold shifts were also reduced in carbamathione-treated animals. At 3 wk, threshold shifts averaged 15 dB or less at all frequencies in treated animals and 30 to 35 dB in control animals. Averaged OHC losses were 30% to 40% in carbamathione-treated animals and 60% in control animals. IHC losses were 5% in the 4- to 10-kHz region in treated animals and 10% to 20% in control animals. MET administration reduced noise-induced threshold shifts. ANOVA revealed a significant difference (<.001). Mean OHC and IHC losses were also significantly reduced (<.001). These data lend further support to the growing body of evidence that oxidative stress, generated in part by glutamate **excitotoxicity**, impaired mitochondrial function and GSH depletion causes cochlear injury induced by noise. Enhancing the cellular oxidative stress defense pathways in the cochlea eliminates noise-induced cochlear injury. The data also suggest strategies for therapeutic intervention to reduce NIHL clin.

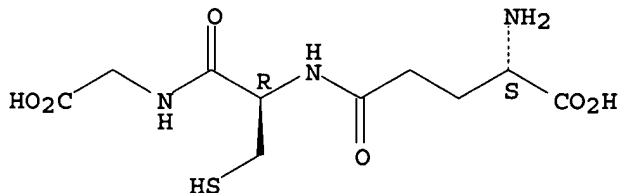
IT 70-18-8, GSH, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study) (deficiency; enhancing intrinsic cochlear stress defenses to reduce noise-induced hearing loss)

RN 70-18-8 HCAPLUS

CN Glycine, L-γ-glutamyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 348-67-4, D-Methionine 3040-38-8, Acetyl-L-carnitine

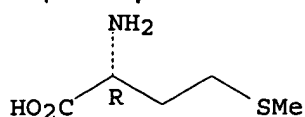
157723-51-8, Carbamathione

RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (enhancing intrinsic cochlear stress defenses to reduce noise-induced hearing loss)

RN 348-67-4 HCAPLUS

CN D-Methionine (9CI) (CA INDEX NAME)

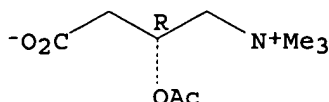
Absolute stereochemistry. Rotation (+).



RN 3040-38-8 HCAPLUS

CN 1-Propanaminium, 2-(acetyloxy)-3-carboxy-N,N,N-trimethyl-, inner salt,
(2R)- (9CI) (CA INDEX NAME)

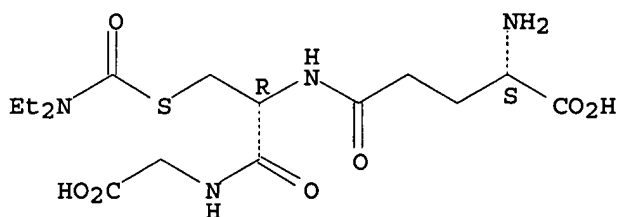
Absolute stereochemistry.



RN 157723-51-8 HCAPLUS

CN Glycine, L-gamma-glutamyl-S-[(diethylamino)carbonyl]-L-cysteinyl- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.



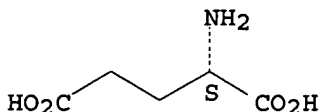
IT 56-86-0, L-Glutamic acid, biological studies

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(**excitotoxicity**; enhancing intrinsic cochlear stress defenses
to reduce noise-induced hearing loss)

RN 56-86-0 HCAPLUS

CN L-Glutamic acid (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

144 THERE ARE 144 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L53 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:123601 HCAPLUS

DOCUMENT NUMBER: 136:145293

TITLE: Therapeutic use of D-methionine to reduce the
toxicity of noise

INVENTOR(S): Campbell, Kathleen C. M.

PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 21 pp., Cont.-in-part of U.S.
 6,265,386.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002019443	A1	20020214	US 2001-911195	20010723
US 6187817	B1	20010213	US 1997-942845	19971002
US 6265386	B1	20010724	US 1998-57065	19980408
US 2004110719	A1	20040610	US 2003-694448	20031027
US 2004127568	A1	20040701	US 2003-694432	20031027
PRIORITY APPLN. INFO.:			US 1997-942845	A2 19971002
			US 1998-57065	A2 19980408
			US 1996-27750P	P 19961003
			US 2001-911195	A1 20010723

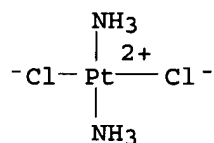
OTHER SOURCE(S): MARPAT 136:145293

AB Methods of preventing or reducing hearing or balance loss and damage to ear cells in patients who have been exposed to toxic levels of noise are provided. These methods comprise administering an effective amount of a methionine protective agent, such as D-methionine, prior to, simultaneously with, or subsequently to exposure to noise. Combinations of these time periods can also be employed.

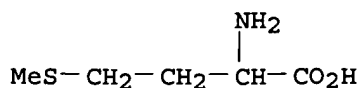
IT 15663-27-1, Cisplatin
 RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
 (therapeutic use of D-methionine to reduce noise toxicity)

RN 15663-27-1 HCAPLUS

CN Platinum, diamminedichloro-, (SP-4-2)- (9CI) (CA INDEX NAME)

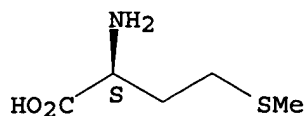


IT 59-51-8, Methionine 63-68-3, L-Methionine, biological studies 348-67-4, D-Methionine 502-83-0, Methioninol 1319-79-5 13073-35-3, Ethionine 29908-03-0, S-Adenosyl-L-methionine
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (therapeutic use of D-methionine to reduce noise toxicity)
 RN 59-51-8 HCAPLUS
 CN Methionine (9CI) (CA INDEX NAME)



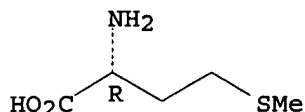
RN 63-68-3 HCAPLUS
 CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

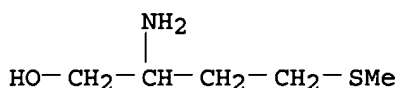


RN 348-67-4 HCAPLUS
CN D-Methionine (9CI) (CA INDEX NAME)

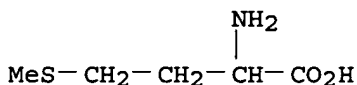
Absolute stereochemistry. Rotation (+).



RN 502-83-0 HCAPLUS
CN 1-Butanol, 2-amino-4-(methylthio)- (7CI, 8CI, 9CI) (CA INDEX NAME)



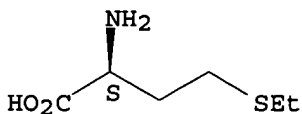
RN 1319-79-5 HCAPLUS
CN L-Methionine, hydroxy- (9CI) (CA INDEX NAME)



D1-OH

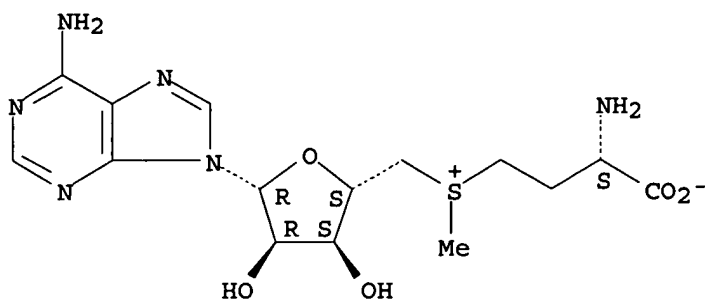
RN 13073-35-3 HCAPLUS
CN L-Homocysteine, S-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 29908-03-0 HCAPLUS
CN Adenosine, 5'-[[(3S)-3-amino-3-carboxypropyl]methylsulfonio]-5'-deoxy-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L53 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:537491 HCAPLUS

DOCUMENT NUMBER: 135:117260

TITLE: Therapeutic use of D-methionine to reduce the toxicity of ototoxic drugs, noise, and radiation

INVENTOR(S): Campbell, Kathleen C. M.

PATENT ASSIGNEE(S): Southern Illinois University School of Medicine, USA

SOURCE: U.S., 23 pp., Cont.-in-part of U.S. 6,187,817.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6265386	B1	20010724	US 1998-57065	19980408
US 6187817	B1	20010213	US 1997-942845	19971002
PT 1019036	T	20031128	PT 1998-915362	19980408
ES 2202834	T3	20040401	ES 1998-915362	19980408
US 2002019443	A1	20020214	US 2001-911195	20010723
US 2004110719	A1	20040610	US 2003-694448	20031027
US 2004127568	A1	20040701	US 2003-694432	20031027
PRIORITY APPLN. INFO.:			US 1997-942845	A2 19971002
			US 1996-27750P	P 19961003
			US 1998-57065	A2 19980408
			US 2001-911195	A1 20010723

AB Methods of preventing or reducing hearing or balance loss, damage to ear cells, weight loss, gastrointestinal toxicity, neurotoxicity, alopecia, and prolonging survival in patients undergoing treatment with therapeutically effective amts. of platinum-containing chemotherapeutic agents such as cisplatin are provided. Methods are also provided for preventing or reducing such symptoms in patients undergoing treatment with loop diuretics, aminoglycoside antibiotics, iron chelating agents, quinine, and quinidine, or those who have been exposed to toxic levels of noise or radiation. These methods comprise administering an effective amount of a methionine protective agent, such as D-methionine, prior to, simultaneously with, or subsequently to administration of the platinum-containing chemotherapeutic agent, loop diuretic agent, etc., or exposure to noise or radiation. Combinations of these time periods can also be employed.

IT 7439-89-6, Iron, biological studies

RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(chelating agents; therapeutic use of D-methionine and related compds.
to reduce toxicity of ototoxic drugs, noise,
platinum-containing antitumor drugs, and radiation)

RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

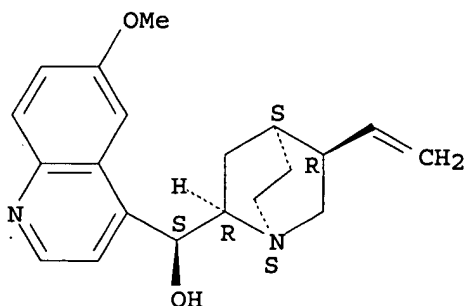
IT 56-54-2, Quinidine 57-92-1, Streptomycin, biological
studies 59-01-8, Kanamycin 114-07-8, Erythromycin
130-95-0, Quinine 1403-66-3, Gentamicin
1404-04-2, Neomycin 1404-90-6, Vancomycin
6379-56-2, Hygromycin 7542-37-2, Paromomycin
14096-51-6, Dichloro(ethylenediamine)platinum(II)
14215-58-8, Chloro(diethylenetriamine)platinum(II) chloride
14913-33-8, trans-Diamminedichloroplatinum(II) 15663-27-1
, Cisplatin 20115-64-4 32986-56-4, Tobramycin
37517-28-5, Amikacin 41575-93-3 41575-94-4,
Carboplatin 41666-77-7 56391-56-1, Netilmicin
62928-11-4, Iproplatin 64363-09-3 67254-31-3
74790-08-2, Spiroplatin 114579-59-8 141610-50-6
148977-78-0 149055-58-3

RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)

(therapeutic use of D-methionine and related compds. to reduce
toxicity of ototoxic drugs, noise, platinum-containing
antitumor drugs, and radiation)

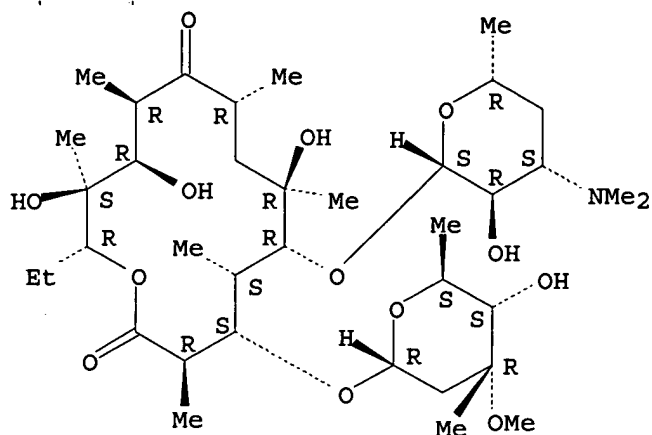
RN 56-54-2 HCAPLUS
CN Cinchonan-9-ol, 6'-methoxy-, (9S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 57-92-1 HCAPLUS
CN D-Streptamine, O-2-deoxy-2-(methylamino)- α -L-glucopyranosyl-
(1 \rightarrow 2)-O-5-deoxy-3-C-formyl- α -L-lyxofuranosyl-(1 \rightarrow 4)-
N,N'-bis(aminoiminomethyl)- (9CI) (CA INDEX NAME)

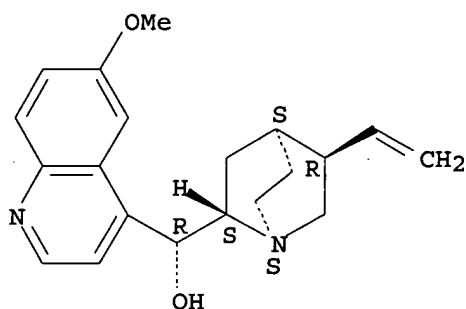
Absolute stereochemistry.



RN 130-95-0 HCAPLUS

CN Cinchonan-9-ol, 6'-methoxy-, (8 α ,9R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 1403-66-3 HCAPLUS

CN Gentamicin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 1404-04-2 HCAPLUS

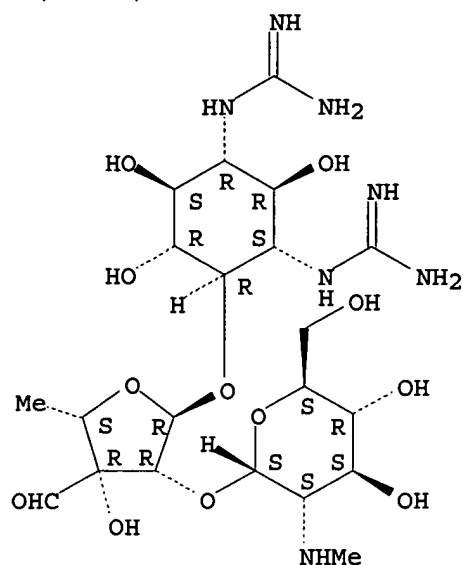
CN Neomycin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 1404-90-6 HCAPLUS

CN Vancomycin (8CI, 9CI) (CA INDEX NAME)

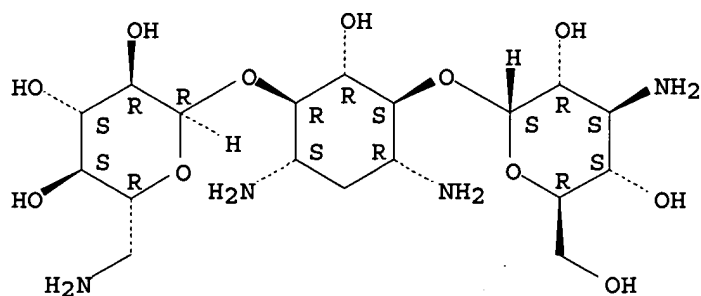
Absolute stereochemistry.



RN 59-01-8 HCAPLUS

CN D-Streptamine, O-3-amino-3-deoxy- α -D-glucopyranosyl-(1 \rightarrow 6)-O-[6-amino-6-deoxy- α -D-glucopyranosyl-(1 \rightarrow 4)]-2-deoxy- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

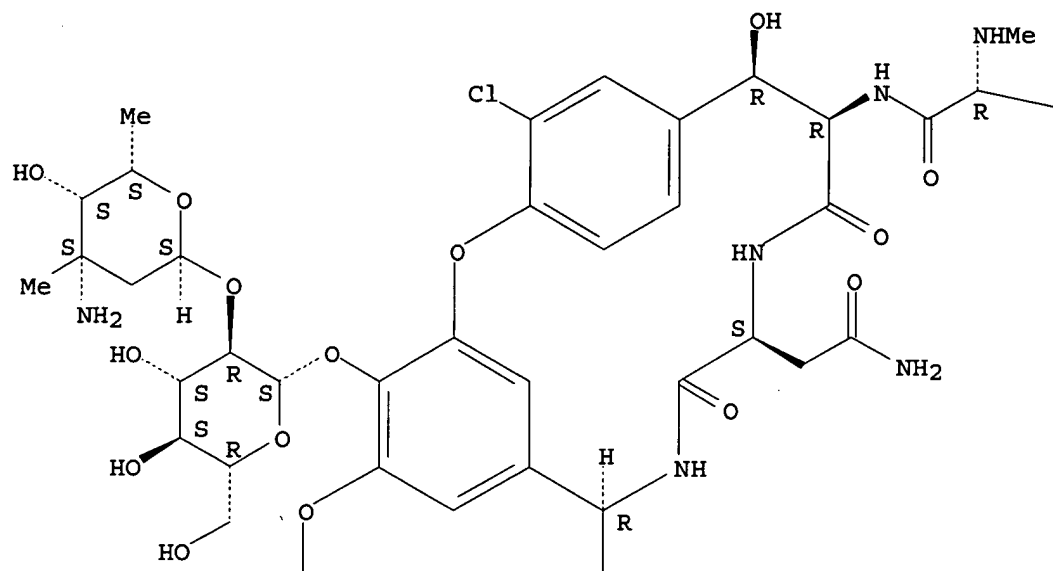


RN 114-07-8 HCAPLUS

CN Erythromycin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

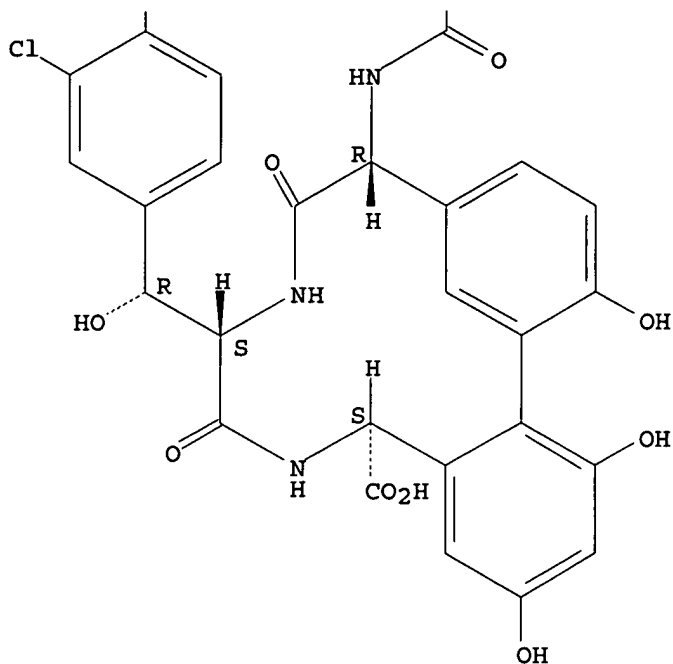
PAGE 1-A



PAGE 1-B

— Bu-i

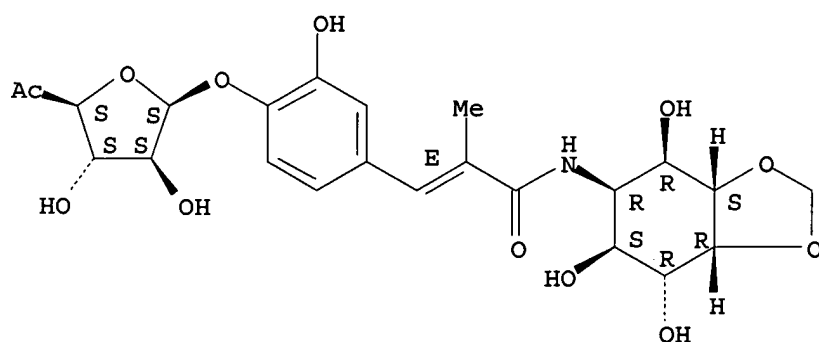
PAGE 2-A



RN 6379-56-2 HCAPLUS

CN D-neo-Inositol, 5-deoxy-5-[[[(2E)-3-[4-[(6-deoxy-β-D-arabino-hexofuranos-5-ulos-1-yl)oxy]-3-hydroxyphenyl]-2-methyl-1-oxo-2-propenyl]amino]-1,2-O-methylene- (9CI) (CA INDEX NAME)

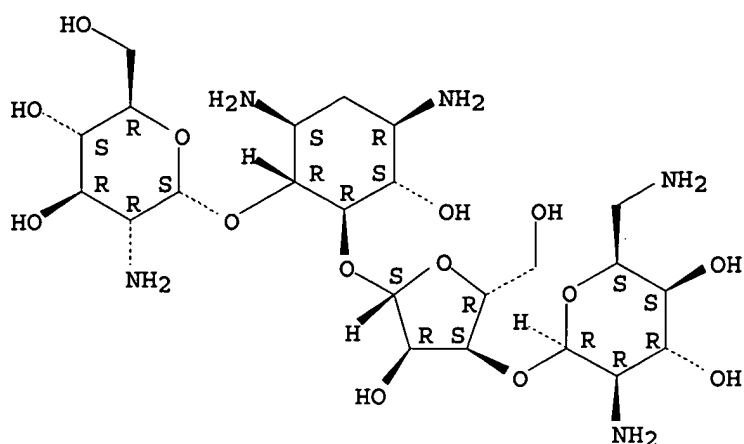
Absolute stereochemistry.
Double bond geometry as shown.



RN 7542-37-2 HCAPLUS

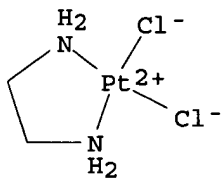
CN D-Streptamine, O-2-amino-2-deoxy-α-D-glucopyranosyl-(1→4)-O-[O-2,6-diamino-2,6-dideoxy-β-L-idopyranosyl-(1→3)-β-D-ribofuranosyl-(1→5)]-2-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



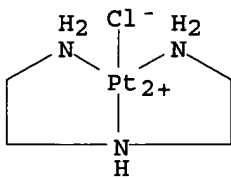
RN 14096-51-6 HCAPLUS

CN Platinum, dichloro(1,2-ethanediamine- κ N, κ N')-, (SP-4-2)- (9CI)
(CA INDEX NAME)



RN 14215-58-8 HCAPLUS

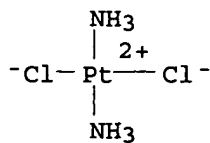
CN Platinum(1+), [N-[2-(amino- κ N)ethyl]-1,2-ethanediamine- κ N, κ N']chloro-, chloride, (SP-4-2)- (9CI) (CA INDEX NAME)



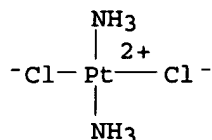
● Cl⁻

RN 14913-33-8 HCAPLUS

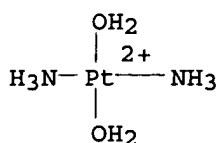
CN Platinum, diamminedichloro-, (SP-4-1)- (9CI) (CA INDEX NAME)



RN 15663-27-1 HCAPLUS
 CN Platinum, diamminedichloro-, (SP-4-2)- (9CI) (CA INDEX NAME)

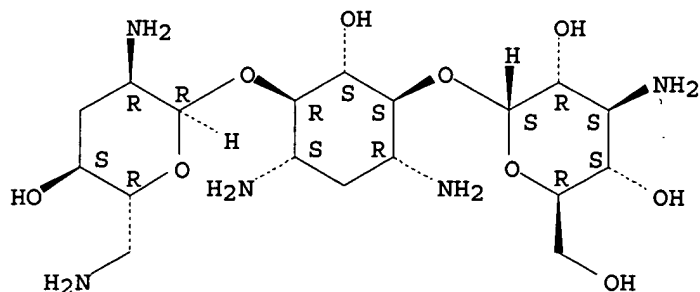


RN 20115-64-4 HCAPLUS
 CN Platinum(2+), diamminediaqua-, (SP-4-2)- (9CI) (CA INDEX NAME)



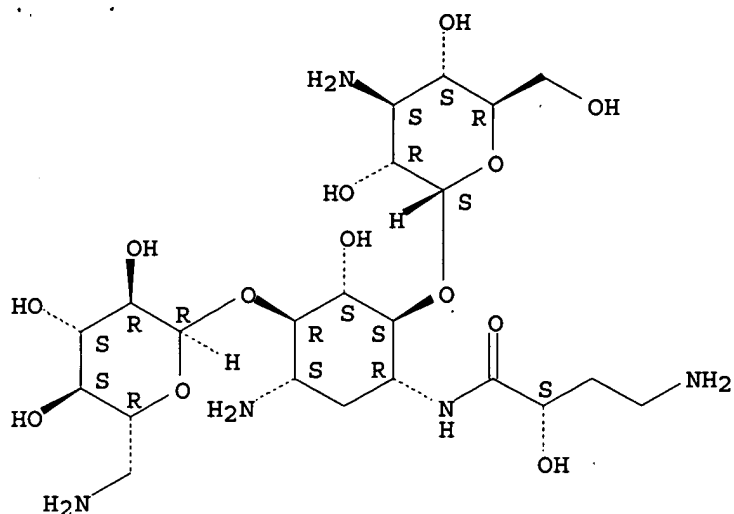
RN 32986-56-4 HCAPLUS
 CN D-Streptamine, O-3-amino-3-deoxy- α -D-glucopyranosyl-(1 \rightarrow 6)-O-[2,6-diamino-2,3,6-trideoxy- α -D-ribo-hexopyranosyl-(1 \rightarrow 4)]-2-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



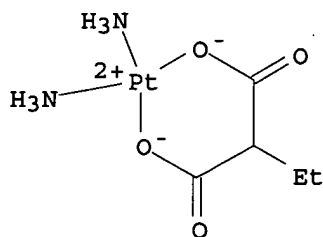
RN 37517-28-5 HCAPLUS
 CN D-Streptamine, O-3-amino-3-deoxy- α -D-glucopyranosyl-(1 \rightarrow 6)-O-[6-amino-6-deoxy- α -D-glucopyranosyl-(1 \rightarrow 4)]-N1-[(2S)-4-amino-2-hydroxy-1-oxobutyl]-2-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



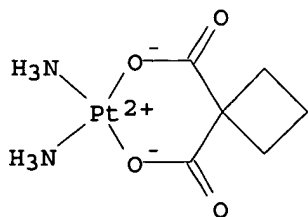
RN 41575-93-3 HCAPLUS

CN Platinum, diammine[ethylpropanedioato(2-)-κO1,κO3]-, (SP-4-2) - (9CI) (CA INDEX NAME)



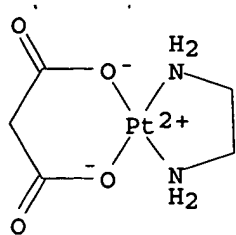
RN 41575-94-4 HCAPLUS

CN Platinum, diammine[1,1-cyclobutanedi(carboxylato-κO)(2-)]-, (SP-4-2) - (9CI) (CA INDEX NAME)



RN 41666-77-7 HCAPLUS

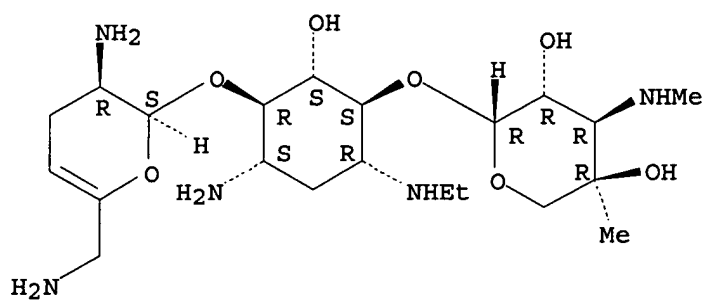
CN Platinum, (1,2-ethanediamine-κN,κN') [propanedioato(2-)-κO1,κO3]-, (SP-4-2) - (9CI) (CA INDEX NAME)



RN 56391-56-1 HCAPLUS

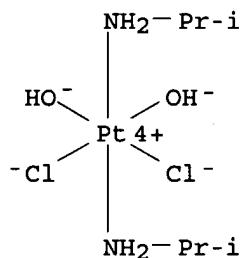
CN D-Streptamine, O-3-deoxy-4-C-methyl-3-(methylamino)- β -L-arabinopyranosyl-(1 \rightarrow 6)-O-[2,6-diamino-2,3,4,6-tetradeoxy- α -D-glycero-hex-4-enopyranosyl-(1 \rightarrow 4)]-2-deoxy-N1-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



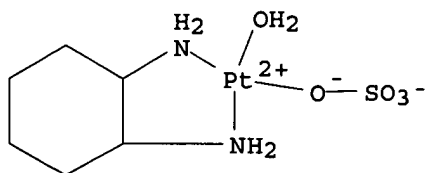
RN 62928-11-4 HCAPLUS

CN Platinum, dichlorodihydroxybis(2-propanamine)-, (OC-6-33)- (9CI) (CA INDEX NAME)

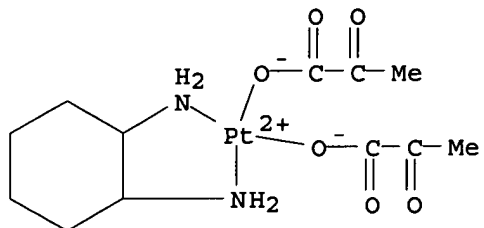


RN 64363-09-3 HCAPLUS

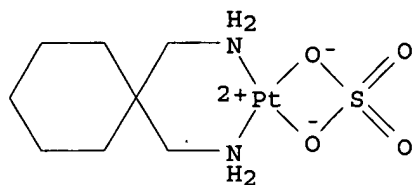
CN Platinum, aqua(1,2-cyclohexanediamine- κ N, κ N') [sulfato(2-)- κ O]-, (SP-4-3)- (9CI) (CA INDEX NAME)



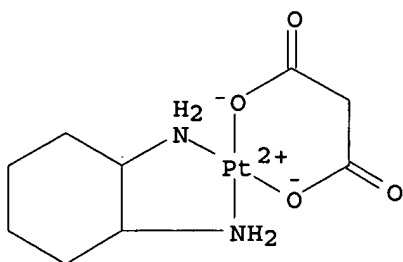
RN 67254-31-3 HCAPLUS
 CN Platinum, (1,2-cyclohexanediamine- κ N, κ N')bis(2-oxopropanoato- κ O)-, (SP-4-2)- (9CI) (CA INDEX NAME)



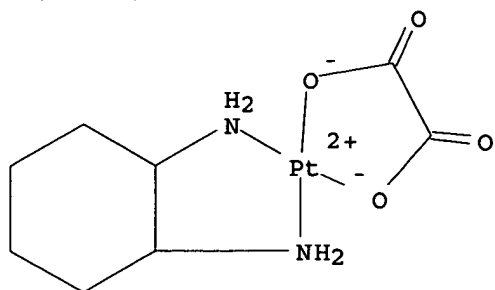
RN 74790-08-2 HCAPLUS
 CN Platinum, (1,1-cyclohexanedimethanamine- κ N, κ N') [sulfato(2-)- κ O, κ O']-, (SP-4-2)- (9CI) (CA INDEX NAME)



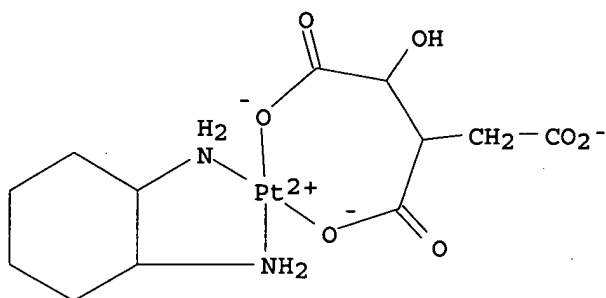
RN 114579-59-8 HCAPLUS
 CN Platinum, (1,2-cyclohexanediamine- κ N, κ N') [propanedioato(2-)- κ O1, κ O3]-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 141610-50-6 HCAPLUS
 CN Platinum, (1,2-cyclohexanediamine- κ N, κ N') [ethanedioato(2-)- κ O1, κ O2]-, (SP-4-2)- (9CI) (CA INDEX NAME)

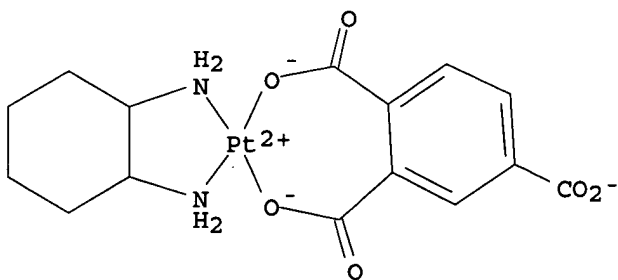


RN 148977-78-0 HCAPLUS
 CN Platinate(1-), (1,2-cyclohexanediamine-κN,κN') [1-hydroxy-1,2,3-propanetricarboxylato(3-)-κO1,κO2]-, hydrogen, (SP-4-3)- (9CI)
 (CA INDEX NAME)



● H⁺

RN 149055-58-3 HCAPLUS
 CN Platinate(1-), [1,2,4-benzenetricarboxylato(3-)-κO1,κO2] (1,2-cyclohexanediamine-κN,κN')-, hydrogen, (SP-4-3)- (9CI) (CA INDEX NAME)



● H⁺

IT 59-51-8, Methionine 63-68-3, L-Methionine, biological studies 348-67-4, D-Methionine 502-83-0, Methioninol

1319-79-5 6094-76-4, Homomethionine 13073-35-3

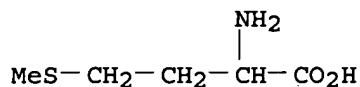
, Ethionine 29908-03-0, S-Adenosyl-L-methionine

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(therapeutic use of D-methionine and related compds. to reduce toxicity of ototoxic drugs, noise, platinum-containing antitumor drugs, and radiation)

RN 59-51-8 HCAPLUS

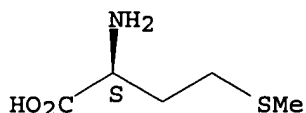
CN Methionine (9CI) (CA INDEX NAME)



RN 63-68-3 HCAPLUS

CN L-Methionine (9CI) (CA INDEX NAME)

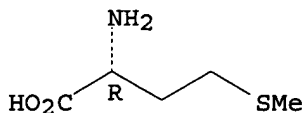
Absolute stereochemistry.



RN 348-67-4 HCAPLUS

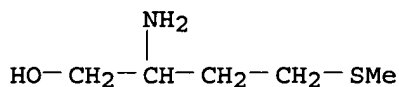
CN D-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



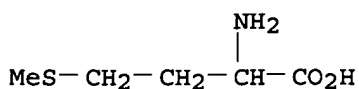
RN 502-83-0 HCAPLUS

CN 1-Butanol, 2-amino-4-(methylthio)- (7CI, 8CI, 9CI) (CA INDEX NAME)



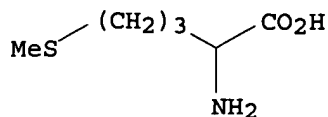
RN 1319-79-5 HCAPLUS

CN L-Methionine, hydroxy- (9CI) (CA INDEX NAME)



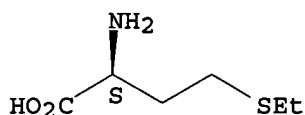
D1-OH

RN 6094-76-4 HCAPLUS
 CN Norvaline, 5-(methylthio)- (9CI) (CA INDEX NAME)



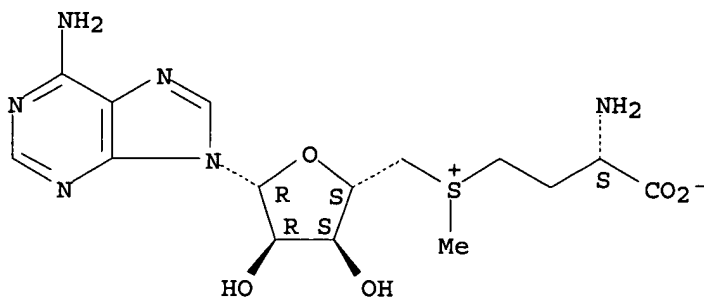
RN 13073-35-3 HCAPLUS
 CN L-Homocysteine, S-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 29908-03-0 HCAPLUS
 CN Adenosine, 5'-[[[(3S)-3-amino-3-carboxypropyl]methylsulfonio]-5'-deoxy-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 72 THERE ARE 72 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:102990 HCAPLUS

DOCUMENT NUMBER: 135:116687

TITLE: Evaluation of D-methionine as a cytoprotectant in cisplatin treatment of an animal model for ovarian cancer

AUTHOR(S): Cloven, Noelle Gillette; Re, Alesandra; McHale, Michael T.; Burger, Robert A.; DiSaia, Philip J.; Rose, G. Scott; Campbell, Kathleen C. M.; Fan, Hung

CORPORATE SOURCE: Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Clinical Cancer Center, University of California Irvine, Orange, CA, 92868, USA

SOURCE: Anticancer Research (2000), 20(6B), 4205-4209
 CODEN: ANTRD4; ISSN: 0250-7005

PUBLISHER: International Institute of Anticancer Research
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Fischer rats were injected i.p. with 106 NuTu-19 ovarian cancer cells and treated as follows: group 1 received no treatment, group 2 received cisplatin at 4 mg/kg and group 3 received cisplatin at 4 mg/kg plus D-methionine (D-met). Group 4 received cisplatin at 8 mg/kg and group 5 received cisplatin at 8 mg/kg plus D-met. Treatment was initiated 4 wk after injection of the NuTu-19 cells and consisted of 4 weekly i.p. injections. In the animals given cisplatin at 8 mg/kg plus D-met, death from toxicity was prevented and all the animals completed the 4 treatments. In contrast, only two animals in group 4 (cisplatin at 8 mg/kg alone) completed 4 treatments. There was an improvement of survival for the animals given D-met. In all the treated groups except for group 4, there was an improvement in survival compared to the control group. When groups 2 and 3 (4 mg cisplatin/kg +/- D-met) were compared, there was a subjective decrease in tumor response for group 3, but mean survival was not statistically different. A comparison of groups 2 and 5 revealed no survival benefit by the use of high-dose cisplatin with D-met. The results indicate that D-met provides cytoprotection against cisplatin toxicity without significant compromise of antitumor activity. Although the use of D-met allowed significant dose intensification of cisplatin above standard doses, there was no survival advantage in this group of animals. The indications for its use in the treatment of ovarian cancer remain to be determined

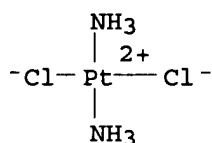
IT 15663-27-1, Cisplatin

RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(D-methionine as cytoprotectant against cisplatin toxicity in ovarian cancer)

RN 15663-27-1 HCAPLUS

CN Platinum, diamminedichloro-, (SP-4-2)- (9CI) (CA INDEX NAME)



IT 348-67-4, D-Methionine

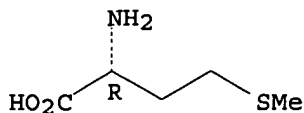
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(D-methionine as cytoprotectant against cisplatin toxicity in ovarian cancer)

RN 348-67-4 HCAPLUS

CN D-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:249071 HCAPLUS

DOCUMENT NUMBER: 130:262147

TITLE: Use of D-methionine or other methionine compound to reduce the toxicity of ototoxic drugs, noise, and radiation

INVENTOR(S): Campbell, Kathleen C. M.

PATENT ASSIGNEE(S): Southern Illinois University, USA

SOURCE: PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9917765	A1	19990415	WO 1998-US6960	19980408
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6187817	B1	20010213	US 1997-942845	19971002
CA 2303901	AA	19990415	CA 1998-2303901	19980408
AU 9869568	A1	19990427	AU 1998-69568	19980408
AU 753039	B2	20021003		
EP 1019036	A1	20000719	EP 1998-915362	19980408
EP 1019036	B1	20030625		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001518499	T2	20011016	JP 2000-514636	19980408
AT 243511	E	20030715	AT 1998-915362	19980408
PT 1019036	T	20031128	PT 1998-915362	19980408
ES 2202834	T3	20040401	ES 1998-915362	19980408
PRIORITY APPLN. INFO.:			US 1997-942845	A 19971002
			US 1996-27750P	P 19961003
			WO 1998-US6960	W 19980408

OTHER SOURCE(S): MARPAT 130:262147

AB Methods of preventing or reducing hearing or balance loss, damage to ear cells, weight loss, gastrointestinal toxicity, neurotoxicity, alopecia, and prolonging survival in patients undergoing treatment with therapeutically effective amts. of platinum-containing chemotherapeutic agents, e.g. cisplatin, are provided. Methods are also provided for preventing or reducing such symptoms in patients undergoing treatment with loop diuretics, aminoglycoside antibiotics, iron chelating agents, quinine, and quinidine, or those who have been exposed to toxic levels of noise or radiation. These methods comprise administering an effective amount of a methionine protective agent, e.g. D-methionine, prior to, simultaneously with, or subsequently to administration of the platinum-containing chemotherapeutic agent, loop diuretic agent, etc., or exposure to noise or radiation. Combinations of these time periods can also be employed.

IT 7439-89-6, Iron, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(chelating agents; methionine compds. to reduce toxicity of
ototoxic drugs, noise, and radiation)

RN 7439-89-6 HCAPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

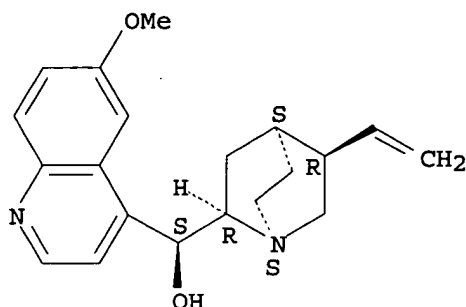
IT 56-54-2, Quinidine 130-95-0, Quinine 15663-27-1
, Cisplatin

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(methionine compds. to reduce toxicity of ototoxic
drugs, noise, and radiation)

RN 56-54-2 HCAPLUS

CN Cinchonan-9-ol, 6'-methoxy-, (9S)- (9CI) (CA INDEX NAME)

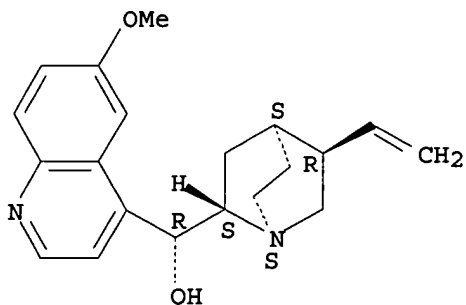
Absolute stereochemistry. Rotation (+).



RN 130-95-0 HCAPLUS

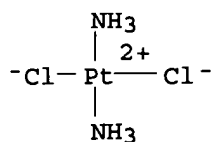
CN Cinchonan-9-ol, 6'-methoxy-, (8α,9R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

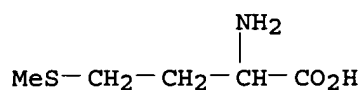


RN 15663-27-1 HCAPLUS

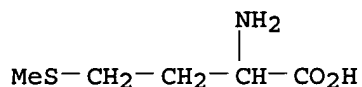
CN Platinum, diamminedichloro-, (SP-4-2)- (9CI) (CA INDEX NAME)



IT 59-51-8, Methionine 59-51-8D, Methionine, compds.
 63-68-3, L-Methionine, biological studies 63-68-3D,
 L-Methionine, derivs., biological studies 348-67-4, D-Methionine
 348-67-4D, D-Methionine, derivs. 502-83-0, Methioninol
 1319-79-5 13073-35-3, Ethionine 29908-03-0,
 S-Adenosyl-L-methionine
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
 (Uses)
 (methionine compds. to reduce toxicity of ototoxic
 drugs, noise, and radiation)
 RN 59-51-8 HCAPLUS
 CN Methionine (9CI) (CA INDEX NAME)

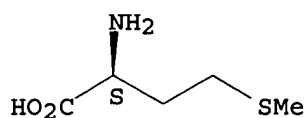


RN 59-51-8 HCAPLUS
 CN Methionine (9CI) (CA INDEX NAME)



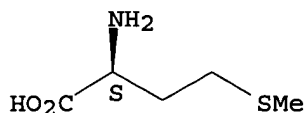
RN 63-68-3 HCAPLUS
 CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



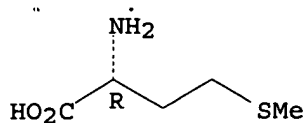
RN 63-68-3 HCAPLUS
 CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



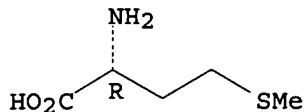
RN 348-67-4 HCAPLUS
 CN D-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

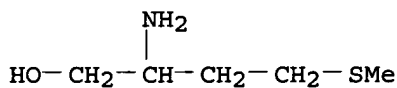


RN 348-67-4 HCAPLUS
CN D-Methionine (9CI) (CA INDEX NAME)

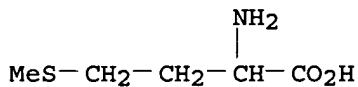
Absolute stereochemistry. Rotation (+).



RN 502-83-0 HCAPLUS
CN 1-Butanol, 2-amino-4-(methylthio)- (7CI, 8CI, 9CI) (CA INDEX NAME)



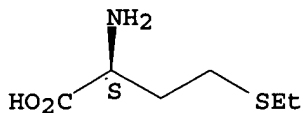
RN 1319-79-5 HCAPLUS
CN L-Methionine, hydroxy- (9CI) (CA INDEX NAME)



D1-OH

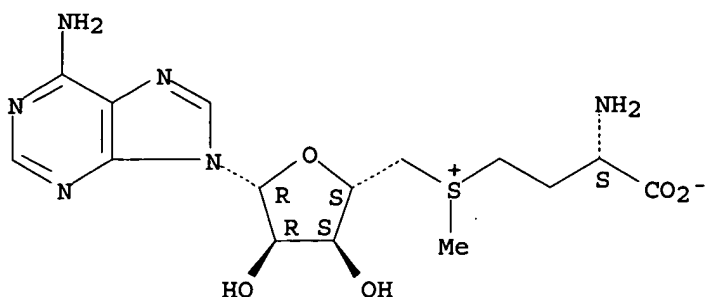
RN 13073-35-3 HCAPLUS
CN L-Homocysteine, S-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 29908-03-0 HCAPLUS
CN Adenosine, 5'-[[[(3S)-3-amino-3-carboxypropyl]methylsulfonio]-5'-deoxy-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:726535 HCAPLUS

DOCUMENT NUMBER: 130:119188

TITLE: A semiquantitative analysis of the effects of cisplatin on the rat stria vascularis

AUTHOR(S): Meech, Robert P.; Campbell, Kathleen C. M.; Hughes, Larry P.; Rybak, Leonard P.

CORPORATE SOURCE: Department of Surgery, Southern Illinois University (SIU) School of Medicine, Springfield, IL, 62794-1618, USA

SOURCE: Hearing Research (1998), 124(1-2), 44-59
CODEN: HERED3; ISSN: 0378-5955

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

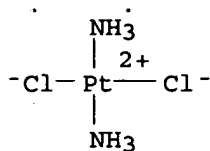
AB Cisplatin (CDDP) is a very effective chemotherapeutic agent but is highly ototoxic. Most studies have focused on the effects of CDDP on the outer hair cells. The purpose of this study was to examine changes in the stria vascularis in cisplatin treated male Wistar rats and to provide semiquant. anal. of the results. We removed a section of the stria vascularis from the basal turn of five control and five CDDP (16 mg/kg) treated rats. Using transmission electron microscopy (TEM) we analyzed: (1) changes to the stria tissue as a whole; and (2) intracellular changes in the marginal cells. We also subjected the samples to semiquant. anal. using the MCID, focusing on three aspects of stria profile abnormalities; the number of abnormal marginal cells in CDDP treated tissue, intracellular stria edema and densitometry. Controls appeared normal, but many pathol. changes were apparent in the exptl. group. Results from the semiquant. anal. indicate cisplatin has a deleterious effect on the stria vascularis including stria edema; bulging, rupture and/or compression of the marginal cells and depletion of the cytoplasmic organelles.

IT 15663-27-1, Cisplatin

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (semiquant. anal. of cisplatin effect on rat stria vascularis)

RN 15663-27-1 HCAPLUS

CN Platinum, diamminedichloro-, (SP-4-2)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:219707 HCAPLUS

DOCUMENT NUMBER: 128:290226

TITLE: Therapeutic use of a methionine compound, such as D-methionine, to reduce the toxicity of platinum-containing antitumor compounds

INVENTOR(S): Campbell, Kathleen C. M.

PATENT ASSIGNEE(S): Southern Illinois University, USA

SOURCE: PCT Int. Appl., 65 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9814182	A1	19980409	WO 1997-US18114	19971002
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2265983	AA	19980409	CA 1997-2265983	19971002
CA 2265983	C	20031223		
AU 9748957	A1	19980424	AU 1997-48957	19971002
AU 726392	B2	20001109		
EP 930877	A1	19990728	EP 1997-911634	19971002
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001501626	T2	20010206	JP 1998-516973	19971002
PRIORITY APPLN. INFO.:			US 1996-27750P	P 19961003
			WO 1997-US18114	W 19971002

OTHER SOURCE(S): MARPAT 128:290226

AB Methods are provided for preventing or reducing hearing or balance loss, damage to ear cells, weight loss, gastrointestinal toxicity, neurotoxicity, alopecia, and for prolonging survival in patients undergoing treatment with therapeutically effective amts. of platinum-containing chemotherapeutic agents, e.g. cisplatin, are provided. These methods comprise administering an effective amount of a methionine protective agent, e.g. D-methionine, prior to, simultaneously with, or subsequently to administration of the platinum-containing chemotherapeutic agent. Combinations of these time periods can also be employed.

IT 7440-06-4D, Platinum, compds., biological studies
14096-51-6, Dichloro(ethylenediamine) platinum (II)
14215-58-8 14913-33-8 15663-27-1

20115-64-4 38780-43-7 41575-93-3

41975-94-4 62928-11-4, Iproplatin 64363-09-3

67254-31-3 74790-08-2, Spiroplatin 88483-99-2

114579-59-8 141610-50-6 149055-58-3

RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(methionine compound for reduction of toxicity of platinum-containing antitumor compds.)

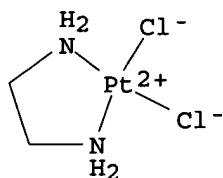
RN 7440-06-4 HCAPLUS

CN Platinum (8CI, 9CI) (CA INDEX NAME)

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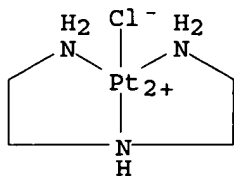
RN 14096-51-6 HCAPLUS

CN Platinum, dichloro(1,2-ethanediamine- κ N, κ N')-, (SP-4-2)- (9CI)
(CA INDEX NAME)



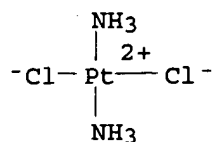
RN 14215-58-8 HCAPLUS

CN Platinum(1+), [N-[2-(amino- κ N)ethyl]-1,2-ethanediamine- κ N, κ N']chloro-, chloride, (SP-4-2)- (9CI) (CA INDEX NAME)

● Cl⁻

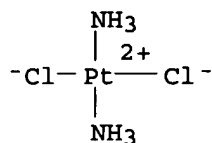
RN 14913-33-8 HCAPLUS

CN Platinum, diamminedichloro-, (SP-4-1)- (9CI) (CA INDEX NAME)



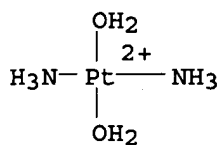
RN 15663-27-1 HCAPLUS

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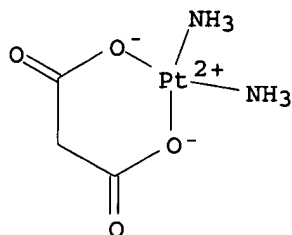
RN 20115-64-4 HCAPLUS

CN Platinum(2+), diamminediaqua-, (SP-4-2) - (9CI) (CA INDEX NAME)



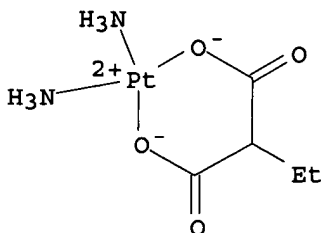
RN 38780-43-7 HCAPLUS

CN Platinum, diammine[propanedioato(2-)-κO1,κO3]-, (SP-4-2) - (9CI) (CA INDEX NAME)



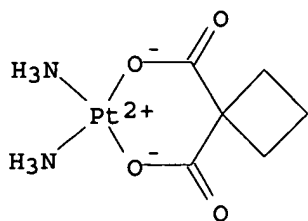
RN 41575-93-3 HCAPLUS

CN Platinum, diammine[ethylpropanedioato(2-)-κO1,κO3]-, (SP-4-2) - (9CI) (CA INDEX NAME)



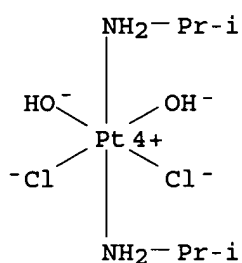
RN 41575-94-4 HCAPLUS

CN Platinum, diammine[1,1-cyclobutanedi(carboxylato-κO)(2-)]-, (SP-4-2) - (9CI) (CA INDEX NAME)



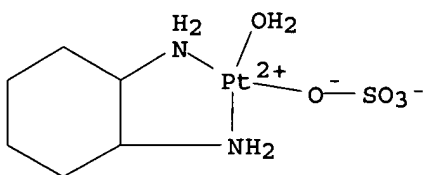
RN 62928-11-4 HCAPLUS

CN Platinum, dichlorodihydroxybis(2-propanamine)-, (OC-6-33)- (9CI) (CA INDEX NAME)



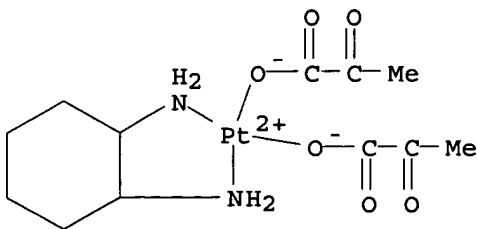
RN 64363-09-3 HCAPLUS

CN Platinum, aqua(1,2-cyclohexanediamine-κN,κN') [sulfato(2-)-κO]-, (SP-4-3)- (9CI) (CA INDEX NAME)



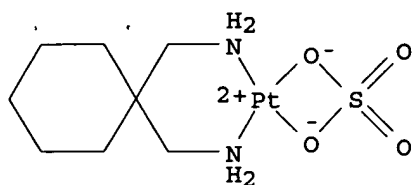
RN 67254-31-3 HCAPLUS

CN Platinum, (1,1-cyclohexanediamine-κN,κN') bis(2-oxopropanoato-κO)-, (SP-4-2)- (9CI) (CA INDEX NAME)



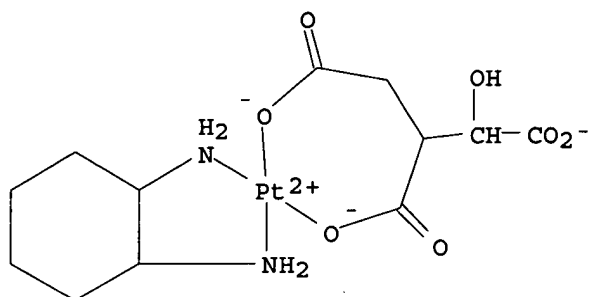
RN 74790-08-2 HCAPLUS

CN Platinum, (1,1-cyclohexanedimethanamine-κN,κN') [sulfato(2-)-κO,κO']-, (SP-4-2)- (9CI) (CA INDEX NAME)



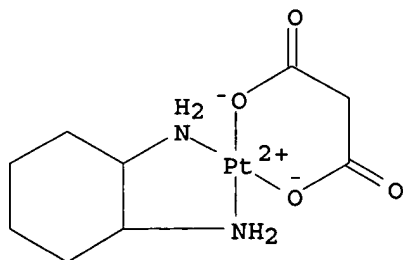
RN 88483-99-2 HCAPLUS

CN Platinate(1-), [3-(carboxy-κO)-2,3-dideoxypentatarato(3-)-κO1] (1,2-cyclohexanediamine-κN,κN')-, hydrogen, (SP-4-3)- (9CI) (CA INDEX NAME)

● H⁺

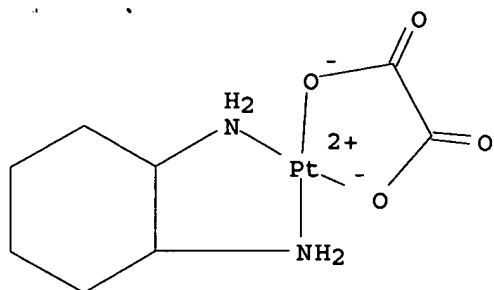
RN 114579-59-8 HCAPLUS

CN Platinum, (1,2-cyclohexanediamine-κN,κN') [propanedioato(2-)-κO1,κO3]-, (SP-4-2)- (9CI) (CA INDEX NAME)

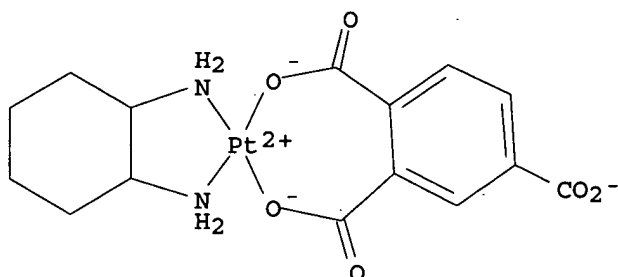


RN 141610-50-6 HCAPLUS

CN Platinum, (1,2-cyclohexanediamine-κN,κN') [ethanedioato(2-)-κO1,κO2]-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 149055-58-3 HCAPLUS
 CN Platinate(1-), [1,2,4-benzenetricarboxylato(3-)-κO1,κO2] (1,2-cyclohexanediamine-κN,κN')-, hydrogen, (SP-4-3)- (9CI) (CA INDEX NAME)

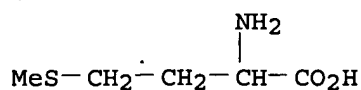


● H⁺

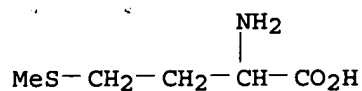
IT 59-51-8, Methionine 59-51-8D, Methionine, derivs.
 63-68-3, L-Methionine, biological studies 348-67-4,
 D-Methionine 502-83-0, Methioninol 1319-79-5
 13073-35-3, Ethionine
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(methionine compound for reduction of toxicity of platinum-containing antitumor compds.)

RN 59-51-8 HCAPLUS
 CN Methionine (9CI) (CA INDEX NAME)

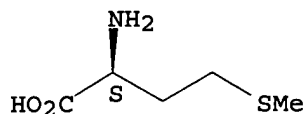


RN 59-51-8 HCAPLUS
 CN Methionine (9CI) (CA INDEX NAME)



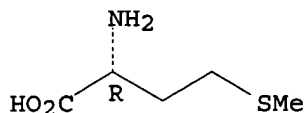
RN 63-68-3 HCAPLUS
CN L-Methionine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

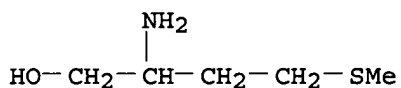


RN 348-67-4 HCAPLUS
CN D-Methionine (9CI) (CA INDEX NAME)

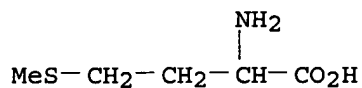
Absolute stereochemistry. Rotation (+).



RN 502-83-0 HCAPLUS
CN 1-Butanol, 2-amino-4-(methylthio)- (7CI, 8CI, 9CI) (CA INDEX NAME)



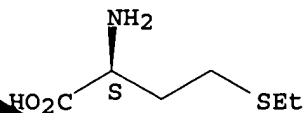
RN 1319-79-5 HCAPLUS
CN L-Methionine, hydroxy- (9CI) (CA INDEX NAME)



D1-OH

RN 13073-35-3 HCAPLUS
CN L-Homocysteine, S-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:25622 HCAPLUS

DOCUMENT NUMBER: 126:84197

TITLE: D-Methionine provides excellent protection from cisplatin **ototoxicity** in the rat

AUTHOR(S): Campbell, Kathleen C. M.; Rybak, Leonard P.; Meech, Robert P.; Hughes, Larry

CORPORATE SOURCE: Department Surgery, Southern Illinois University (SIU) School Medicine, Springfield, IL, 62794-1618, USA

SOURCE: Hearing Research (1996), 102(1/2), 90-98

CODEN: HERED3; ISSN: 0378-5955

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

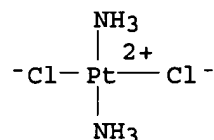
AB Cisplatin (CDDP) is a widely used chemotherapeutic agent. Unfortunately, CDDP is highly **ototoxic**. We tested D-methionine (D-Met), a sulfur containing compound, as an otoprotectant in male Wistar rats. Complete data sets were obtained for five groups of five animals each, including a treated control group (16 mg/kg CDDP), an untreated control group (administered an equivalent volume of saline) and three groups that received either 75, 150, or 300 mg/kg D-Met 30 min prior to the 16 mg/kg CDDP dosing. Auditory brainstem response (ABR) thresholds were obtained in response to clicks, and 1 kHz, 4 kHz, 8 kHz, and 14 kHz toneburst stimuli, before and 3 days after drug administration. SEM was used to examine the outer hair cells of the apical, middle and basal turns of the cochlea. Animal weight was measured on the first and final day. D-Met provided excellent otoprotection even at the lowest level with complete otoprotection obtained for the 300 mg/kg dosing as measured by both ABR and SEM. D-Met also markedly reduced weight loss and mortality. All animals receiving D-Met (15/15) survived to the end of the study period as opposed to only 5/10 of the treated controls.

IT 15663-27-1, Cisplatin

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(D-Methionine provides excellent protection from cisplatin **ototoxicity** in the rat)

RN 15663-27-1 HCAPLUS

CN Platinum, diamminedichloro-, (SP-4-2)- (9CI) (CA INDEX NAME)



IT 348-67-4, D-Methionine

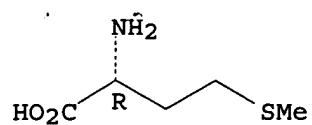
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(D-Methionine provides excellent protection from cisplatin **ototoxicity** in the rat)

RN 348-67-4 HCAPLUS

CN D-Methionine (9CI) (CA INDEX NAME)

absolute stereochemistry. Rotation (+).



REFERENCE COUNT:

65 THERE ARE 65 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT